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BALTIMORE, JULY 13, 1905.

The Manufacturers' Record has
opened an office in New York at 52
Broadway.

THE NATIONAL STATISTICAL SCANDAL.

Its unearthing of the cotton statistical scandal in the National Department of Agriculture more than justifies the six-months' life of the Southern Cotton Association and commends it to the everlasting gratitude of every cotton-grower in the South, every cotton-handler and every cotton manufacturer in the world. To be sure, the Association had well demonstrated the reason for its existence in its successful organization of Southern interests against the determination of divers persons or groups of individuals to use the alleged statistical position of cotton last winter to depress its price. Even granting that the government figures were reliable, the animating impulse of the Association was that the figures did not warrant the depression which would have followed unchecked manipulation of the markets. To its success in halting the bear drive against the staple and in inaugurating movements which may be depended upon to minimize in the future the effects of manipulation of the markets, the Association has added its signal service to the whole cotton world in bringing to light the methods whereby manipulation of the markets has had the aid of official government figures.

Time and again the infallibility of the figures has been solemnly proclaimed even at a time when the head of the Department of Agriculture has committed the woeful blunder, through public interview, of lending the weight of his position to influencing the market, as in August, 1903; time and again there has been emphatic official statement that a leak in the bu-

reau of statistics of the department was absolutely impossible. Now all that has gone by the board, and has gone so strikingly that the prodding may not be expected to end with the scapegoating of one employee. For it is not at all unlikely that the great farming interests of the country and the manufacturing interests more or less dependent upon them may take up for investigation the whole question of the relation of the Agricultural Department to what are known as the speculative crop markets. If there has been a leak in cotton figures, why not a leak in the figures for wheat, for corn, etc.? And if there are such leaks, why should the material interests of the country be threatened by the existence of a statistical bureau in the Department of Agriculture? Why not abolish it?

But the inquiry may not stop even there. The one scandal in one department opens up the whole broad question of the value of the statistical work of the government and the use to which it may be put. Men trained to statistics, expert in the handling of figures as aids to knowledge instead of as material for proof of theories or for promotion of special ends, are, in increasing number, learning to handle with exceeding caution figures set forth by the government. They have the knowledge that hardly a decennial census presents in its entirety opportunity for accurate comparison with a preceding one, as classifications are frequently changed; that the census of 1870 was notoriously imperfect, especially with reference to the South, but consequently affecting the whole, and that after preliminary figures of the census of 1900 had been issued to become the basis for misleading deductions in a very important matter, it was figured out that in a total of 1,503,771 persons of a certain class only 582,522, or more than a third, had not been accounted for in the census of 1890. The fact that alleged professional statisticians have been involved more or less in these errors, or, outside of the government service, have incontinently given the errors popular currency, does not mitigate the evil. It only intensifies the evil.

But that manifestation, traceable to human error in spite of good intent, is a minor matter in comparison with the growing tendency on the part of certain government officials to employ statistics collected by the government, and having, therefore, the stamp of a certain authority, to strengthen the position of this or that party temporarily entrusted with the government. This practice, flourishing in all its rankness during political campaigns, is by no means limited to such periods, but is followed year in and year out. Under the pretext of informing the public officially, figures are systematically circulated under government auspices designed to enlighten the public upon only one phase of national questions under discussion, and, consequently, to make that first impression which is so difficult to overcome by later developments. The practice takes a wide range, dealing

with foreign policies as well as domestic ones, with financial, industrial and social questions, and, were it not for the prompt criticism of students capable of detecting flaws even in the most

carefully-devised statistics, it could be employed to give immortality in office to any political party, however corrupt.

The whole field of government statistical work needs weeding badly.

AMERICAN EDUCATION MENACED BY \$30,000,000.

The gift of \$10,000,000 by John D. Rockefeller to the General Education Board strongly emphasizes the dangers which the MANUFACTURERS' RECORD has seen in that organization ever since it came into being. Every other gift which it may receive will only intensify that danger. It is a part of the tendency represented in the \$10,000,000 given by Carnegie for scientific research and the \$10,000,000 given by him for pensions to teachers. Here are \$30,000,000, probably to be followed by many millions more, controlled by small groups of theorists more or less intimate, the more militant of whom aim apparently to become the clearing-house for the educational activities of this country. If a small group of capitalists could control the entire railroad interests, all the coal and iron mines and all the oil and the timber of the country, their power for ill would not be near so great as would the working out of the possibilities lying in the building up of what is known as the Ogden Movement, for the one could not destroy manhood, while the other can destroy by false teachings and false educational methods the manhood, the self-reliance, the ethical possibilities of all future generations. Any body of men controlling directly or indirectly the absolute disposal of the income of \$30,000,000 or more, and authorized to decide how, when, upon whom and upon what in education that income shall be expended, is in a position to determine what kind of schools, colleges and universities shall be permitted to exist, what kind of individuals shall teach, what books shall be used and what shall be taught in them. That power, threatening the intellectual integrity of coming generations in this country, is too great for any body of men, however honest their motives or lofty their purpose, to be allowed to possess without persistent and vigorous opposition. This is especially true if, as is the case with the particular General Education Board, the body is regarded as far astray as to essentials in education. The power given it by its control of vast sums of money cannot be taken away from it. But common sense and patriotism can counteract the effects of that power. It is for the men of the present generation to work to that end.

If there is in the present economic development any unsoundness which must be corrected before it may become chronic, if economic manifestations are the result of a fevered state of the body economic which requires prompt and scientific treatment, the human mind must be freed and kept free, from the moment it begins to feel educational stimulus to the time when ripely developed it may contribute to the right solution of pressing economic problems, of all influences, immediate or remote, likely to give it the wrong bias and to prevent it from viewing facts either with a prejudice for or unreasoning passion against.

In the nature of things such mental freedom promises to be a thing of naught in the face of an inclination on the part of self-evolved educational hierarchs to form a close corporation for the ultimate control of all the educational energies of the country and for the administration to that end of vast sums of money thrown into the pool by men who, burdened with wealth, feel that it is a disgrace to die rich, and are therefore eager to find some plausible scheme through which to give their millions.

The enormous power conferred upon this General Education Board is shadowed in the following sections in the Act of Congress approved January 12, 1903, incorporating it:

Sec. 2. That the object of the said corporation shall be the promotion of education within the United States of America, without distinction of race, sex or creed.

Sec. 3. That for the promotion of such object the said corporation shall have power to build, improve, enlarge or equip, or to aid others to build, improve, enlarge or equip buildings for elementary or primary schools, industrial schools, technical schools, normal schools, training schools for teachers, or schools of any grade, or for higher institutions of learning, or, in connection therewith, libraries, workshops, gardens, kitchens or other educational accessories; to establish, maintain or endow, or aid others to establish, maintain or endow elementary or primary schools, industrial schools, technical schools, normal schools, training schools for teachers, or schools of any grade, or higher institutions of learning; to employ or aid others to employ teachers and lecturers; to aid, co-operate with or endow associations or other corporations engaged in educational work within the United States of America, or to donate to any such association or corporation any property or moneys which shall at any time be held by the said corporation hereby constituted; to collect educational statistics and information, and to publish and distribute documents and reports containing the same, and in general to do and perform all things necessary or convenient for the promotion of the object of the corporation.

Sec. 4. That the said corporation shall further have power . . . to take or receive, whether by gift, grant, devise, bequest or purchase, any real or personal estate, or to hold, grant, convey, hire or lease the same for the purpose of its incorporation; to accept and administer any trust of money or of real or personal estate for any educational purpose within the object of the corporation as aforesaid; to prescribe by by-laws or otherwise the terms and conditions upon which money, real estate or personal estate shall be acquired or received by the said corporation, and for the grant, transfer, assignment or donation of any or all property of the said corporation, real or personal, to any society or corporation for any of the said purposes for which the said corporation is hereby incorporated,

and otherwise generally for the management of the property and the transaction of the business of the corporation.

No Act of Congress could confer upon a body of citizens greater opportunity for the exercise of immeasurable power over their fellows. The Act incorporating the General Education Board placed it in a position to dominate, under certain conditions, the educational machinery, and, consequently, the educational ideas of the country, and no tyranny, whether of individual or of a group of individuals, could possibly desire a better instrumentality. One of the conditions is to be created through a co-ordination of educational activities. This has been attempted from the start by the movement incorporated in the General Education Board. Discussing more than two years ago the plans of that board, of its associate, the Southern Education Board, and the paternity of both of them, the Conference for Education in the South, President Robert C. Ogden wrote:

A hundred millions could be used, and a hundred millions will be used before the work is thoroughly done. It is planned, with the association of these two boards, for the promotion of the idea of education and for the handling of money, to create a community of interest, a clearing-house—the work of the Peabody board, the work of the Slater board, the work of the Southern Education Board, and the work of the last board, which is called the Board of the General Education Fund—and thus to concentrate the highest intelligence, the result of the best experience and all economies in such a way as to prevent duplication of this work and to insure the best application of money.

Insurance of this community of interest was sought in an overlapping of the membership of the four boards, and its extension and widening was suggested in the representation among those involved in this community of interest of trusteeship of the \$10,000,000 Carnegie Institution for promotion of research, which now has its complement in the Carnegie \$10,000,000 endowment of superannuated college professors.

In this aggregation, ranging in its activities from the primary grade of the common-school system to the institution of highest education and representing at this instant more than \$30,000,000, may be traced the outlines of a possible combination of vast sums of money to be used in such a way, under educational auspices, as to thwart the very purposes of proper education.

The dominant element in this would-be trust can lay not the least claim to the title of educator as that word is conventionally used. But handling their own money or the money of individuals who have been let into the beauties of their scheme, they are becoming powerful factors in an education of the rising generation in confusion of the verities of life, in personal incapacity and in intellectual pauperism. Their professional associates are principally individuals given exaggerated importance as agents of publicity for any movement appealing to them or educators whose fame rests fundamentally upon their ability to persuade billionairism to part with its trifles for education, but who are able to show few substantial benefits of such persuasion, judging from their unremitting call for greater benefactions. The advertisement the funds derived by them has given institutions of learning has not been the advertisement that brings desirable material results for the institutions and their students. Its text has ever been "more yet."

But their propaganda, carried on for many years upon semi-independent but similar lines, is now being concentrated, and its end, if unchecked, is foreshadowed in effects already manifest.

Healthy public opinion against the propaganda cannot be developed too rapidly.

FOR LIGHT ON THE CANAL SITUATION.

The *Engineering and Mining Journal*, referring to the resignation of Mr. Wallace as engineer of the Panama canal, says:

In view of the past record of Mr. John F. Wallace, his position in the engineering profession, and his attitude respecting matters of engineering ethics, in which he has always stood for the best, it is difficult for us to believe that his resignation from the Panama canal was due to the sordid motive attributed to him in the statements of the administration and popularly accepted. It has appeared that there might be something behind his action which has not been made public, putting it in a different light, and the evident demoralization in the engineering corps at the Isthmus lends color to this surmise. If such is the case, it appears to us that it would have been better if Mr. Wallace had made a frank disclosure of his reasons for retiring, but we have no doubt that his decision in this respect was made after thorough consideration. Until all the facts come out engineers will be inclined to suspend judgment on one so eminent among his fellows, and will be reluctant to believe that he has violated the rules that have guided him through his long and distinguished career.

Some little light is let into this situation by the article in this issue of the *MANUFACTURERS' RECORD* written by Mr. C. F. Z. Caracristi, a well-known engineer who has only recently returned from Panama. Mr. Caracristi has spent a good many years in Central and South America, is thoroughly familiar with the Panama canal zone, and during the last few months while in that region he has had the opportunity of seeing something of the inside of the situation there. His article, although

guardedly and conservatively written, gives some insight into the situation in connection with the building of the canal and indicates some of the reasons why Mr. Wallace doubtless felt compelled to resign. The *MANUFACTURERS' RECORD* believes that, regardless of where or whom it hits, justice to the country, without regard to the question of justice to himself, demands of Mr. Wallace a full statement of the reasons which prompted his resignation. Within the last few days the country has been permitted to get just a slight glimpse of the rottenness in the Department of Agriculture, and though someone has said there is a "sitting on the lid" in order to keep the public from getting any deeper view, the whole story will sooner or later probably come out. If there is anything of the same kind connected with the building of the Panama canal, the sooner the country knows it the better. It is not altogether impossible to conceive of this government, though committed to the building of the Panama canal and though it has expended millions in the purchase of that rotten enterprise, having to abandon it and go back to Nicaragua. Whether the trouble is inherent in the Panama situation or whether it is due to mismanagement and to graft are questions which the public has a right to ask of Mr. Wallace and of all others who are familiar with the subject, and expect a frank and honest answer. If in the view of Mr. Wallace the Panama canal is not feasible, or if it is feasible but cannot be constructed except at an unparalleled sacrifice of

life and expenditure of money, or if the trouble is simply graft and political rottenness generally, then it seems to us that it is incumbent upon Mr. Wallace to honestly give his views. Unless he shall do so the final responsibility for disaster, should disaster come, may fall upon him. He cannot escape it by resigning, if his resignation is due to difficulties of the kind, unless he gives the American people the benefit of his knowledge.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 60, 61 and 62.

BANK CLEARINGS INCREASING.

Reports of bank clearings during the last six months from 25 cities throughout the South and Missouri show an increase of nearly 7 per cent. as compared with the corresponding period of last year, the total for the first half of 1905 being \$4,776,595,936, as against \$4,483,676,128 for the first six months of 1904. Some surprising gains are displayed, the highest percentage being by Fort Worth, Texas, where the clearings increased more than 52 per cent. Other large increases were: Baltimore, over 15 per cent.; Washington, nearly 21 per cent.; Galveston, 17 per cent.; Nashville, over 18 per cent.; Birmingham, over 14 per cent.; Augusta, Ga., 13 per cent., and Jacksonville, Fla., over 39 per cent. On the other hand, the declines were in all but one instance comparatively small, and even in that case the latter months are showing large increases over the same months of last year; in fact, only seven of the cities displayed declines for the period of six months, and all but two of that seven have shown a gain in June, some of the increases being very large; for instance, Galveston, 33 per cent.; Fort Worth, 86 per cent.; Savannah, 31 per cent.; Augusta, 68 per cent.; Macon, nearly 51 per cent., and so on.

This barometer of trade therefore presents highly satisfactory reading for the current year, and the promise of last month encourages expectations that the last half of the year will show not only a greater volume of business than the first half, but much larger increases over 1904. Commercial conditions in the South have for a long time displayed great progress, and the steady development of all forms of industry in this section continues unabated, so that the outlook is more than ever favorable.

Mr. R. B. Naylor, secretary Wheeling Board of Trade, Wheeling, W. Va., writes to the *MANUFACTURERS' RECORD* as follows:

I want to thank you for the splendid article on the State Board of Trade published in this week's *MANUFACTURERS' RECORD*. Your paper is widely read in this State, and the publication is certain to have a good effect.

WELCOMED TO KENTUCKY.

On another page of this issue appears the first of a series of special letters by Mr. Albert Phenix dealing with the industrial resources of Kentucky, West Virginia and Virginia, with especial reference to possibilities in mining, lumbering, railroad construction, etc. Bearing upon Mr. Phenix' study the *MANUFACTURERS' RECORD* has received during the past month many gratifying evidences of interest in its work in this particular. Many letters containing cordial expressions of interest have been published. Additional ones follow:

A. S. Henry, vice-president and general manager Kentucky Union Company, Jackson, Ky.:

We note an article which is being largely circulated throughout the Kentucky press stating that it is your intention to send a Mr. Phenix into this section for the purpose of writing up the resources and general advantages of the mountain section of this State. We would be very much pleased to have Mr. Phenix pay this section a visit, as the mineral wealth is very large, and would undoubtedly be of interest to your readers, as also to the general commercial public. The Lexington & Eastern Railway have filed articles of incorporation calling for an extension of its line from Jackson to Hazard, a distance of some 35 miles, which extension will penetrate a new country carrying heavy deposits of excellent coal, both cannel and bituminous, as also excellent timber. The road in question will put a corps of engineers in the field this coming week to locate the line, and it is the understanding that the work will be commenced as soon as possible.

W. H. Blakeley of W. H. Blakeley & Co., real estate and investments, Bowling Green, Ky.:

I see you are going to exploit the Eastern Kentucky and West Virginia coal and timber lands. I would be glad to assist you in exploiting our Western Kentucky coal fields, Kentucky rock asphalt (we have the best in the United States), oolite limestone quarries (we have the best in the United States), as well as iron ore, marl and fire-clay.

PHASE OF CONSOLIDATION.

In two or three States the question of State control of natural oyster territory and the policy of a State's leasing tracts of oyster grounds to individuals is a vital one, in that such a policy is regarded in some quarters as the only sure means of preserving such a natural source of wealth. In one State where it is estimated that such oyster grounds embrace an area of 250,000 acres, the point is made that the State could readily lease such grounds to individuals at \$20 an acre a year, giving it a revenue of \$5,000,000, greater than the aggregate of all its other revenues. The chief opponents to such a policy are the several thousand oystermen, who now, with certain restrictions as to time and means not always regarded, are free to oyster on the public grounds. They have a certain amount of potentiality at the polls, which, however, might readily disappear were it not for the argument, advanced for their benefit, that the leasing of the land by the State would tend to place the control of the occupation in the hands of a combination or trust. This argument loses sight of the fact that even such a combination would in all probability give quite as good employment for the oystermen as they now enjoy, if not better and more systematic; that it would be to the interest of renters to improve their holdings, thus insuring permanency and regularity of supply, and that the revenue derived from the leases would benefit all the people of the State in making possible a wonderful reduction in taxes. The mass of them, under existing conditions, derive no benefit from the oyster grounds, in spite of the specious cry that the grounds belong to all the people of the State. The oystermen may appreciate the feeling of folks in the State not convenient to the oyster grounds by imagining the not impossible situation of the State owning vast tracts of timber land or mineral land. A moment's thought, in the light of their own practices, would demonstrate the tremendous loss that would accrue to the State were every citizen permitted to enter the timber lands and cut right and left as he might please, or open a coal mine and work it as he might see fit. There would not only be an enormous waste with only temporary advantage to

individuals, but in a short while mines and timber lands would be lost forever to the people of the State. It would be impossible to restore the wealth in coal deposits; it would be difficult to replace the forests. But the oyster grounds, now being subjected to a treatment that can, unchecked, result only in permanent exhaustion, may remain a source of profit for all time. The State as a whole must exert itself if that desirable condition is to be maintained.

"A WIDE-OPEN ISTHMUS."

Correspondence from Washington purporting to embody an interview with an official of the Isthmian Canal Commission in that city credits him with the following:

"The suggestion may give many good people in this country a shock, but I do not believe that the construction work on the Isthmus will move along satisfactorily until the zone is thrown 'wide open,' in the sense of the term as it is applied to any of the big American towns. The tens of thousands of men who will labor there when the great project is once fully under way will need recreation, as those who are now digging do. There are at present practically no diversions within striking distance, and, as I have said before, the men have too much time in which to think of themselves. I suppose this phase of the situation will adjust itself in due course of time, unless there be an outcry from the moral sentiment here at home that does not appreciate the necessity of meeting human nature on its own ground when confronted by conditions such as stare us in the face on the Isthmus. What is needed down in the zone is something like Butte, Mont., embodying some of the social features of the great mining camps of the West. I presume it isn't a state of affairs that would commend itself, under normal conditions, to any one of the members of the canal commission, but we are dealing in abnormalities down there, and must take steps accordingly. It is necessary to permit a certain amount of license in order to keep the workers in even a comparatively satisfied frame of mind."

If this interview is from an authoritative source—but it is hoped that it is not—it but emphasizes a warning uttered through the MANUFACTURERS' RECORD by Mr. Courtenay De Kalb as long ago as May 7, 1903. Discussing the chances of having an Isthmian canal, Mr. De Kalb made a strong plea for rational control of the labor question. He dwelt upon the dangers to health, and said:

"Dissipation in all forms predisposes in an extreme degree to tropical ills, particularly to bilious disorders.

"The maintenance of a full force in good physical condition is an essential to success in the conduct of any great engineering enterprise."

Referring to the labor question under the French regime, he said:

"The labor question was one of the most serious difficulties encountered at Panama; in one sense greater than that occasioned by corruption of officials and by engineering incompetence, because it prevented continuous efficiency of effort which might have achieved important results in spite of other disadvantages and administrative evils. The West Indies failed utterly to yield an adequate supply of workers. The negroes of the West Indies after a little time refused to be mustered for service at Panama through fear of death. Africa and the East Indies were drawn upon in vain. No laborers could be found anywhere in the world who were proof against disease provoked by the conditions obtaining in Panama under the French regime. Discipline of laborers and attention to sanitation were practically nil. Such bestial dissipation as took place at Panama has never before been witnessed in modern times, and perhaps

in no times, not even in ancient Babylon.

"No contractor can enjoy any advantages over another in securing better workmen nor in paying lower wages in the proposed construction of the canal.

"American negroes and Mediterranean laborers can endure the climate moderately well within economical limits as to average hours of effective labor rendered per diem per man maintained if they are prevented from violating the rules needful to preserve health in the tropics. This can only be carried out by rigid military discipline, enlisting men on a basis similar to that in vogue for the army, and maintaining the discipline by measures equally severe. The surgeons of our army are the most competent body in America if given full authority to draw up rules and regulations covering hours of labor, clothing, food, recreation and sleep, which will insure the greatest possible healthfulness and efficiency of the working force. Such discipline can only be established under authority from Congress. The enactment of appropriate legislation will be one proof that the American people are not to be trifled with by expending their money to the extent of some \$250,000,000, only to be told at the end that the work is but half-finished or cannot be completed at all."

Mr. De Kalb's warning suggests that moral sentiment in the United States protesting against "a wide-open Isthmus" would be absolutely promotive of success in canal construction.

INDUSTRIAL MEMPHIS.

Col. I. F. Peters, commissioner of the Memphis Industrial League, in his annual report for the past fiscal year, now published in pamphlet form, shows that during the year 14 industries, with an aggregate capital of more than \$6,000,000, and employing or to employ in the neighborhood of 2000 persons, were secured for Memphis. Colonel Peters cites figures showing that since 1900 more than 7000 houses have been built within the city limits and about 2400 in its immediate neighborhood, with 500 under construction at the present time, while the population has increased from 102,320 to 175,436.

On Lookout for Industries.

[Special Cor. Manufacturers' Record.]

Strong Board of Trade,

Strong, Ark., July 8.

The Strong Board of Trade was organized June 30 with Messrs. L. A. Morgan, president; F. P. Stevenson, L. M. Stevenson and J. G. Robinson, vice-presidents; W. A. Murphy, treasurer, and W. E. Womble, secretary and manager. The president, the first vice-president, the third vice-president and treasurer, with Messrs. John Wallace, T. M. Gorman and D. M. Durrett, are the directors.

Strong is a new town, having been started less than three years ago, but it has now a population of several hundred thrifty inhabitants, a bank, three hotels, 10 brick mercantile houses, with three more building, and eight other stores, a \$5000 school building, two churches, two large halls and many neat cottages and other residences. There is a large saw and planing mill here, a modern cotton gin and a telephone system. It is the largest town between the terminals on the Eldorado & Bastrop Railroad.

An electric-light plant will be built and a shingle mill and another saw-mill are to be put up. A large stove mill is also contemplated.

The Strong Board of Trade will work for the upbuilding of the town and the attraction of capital and immigrants. We have every natural advantage, and can offer splendid inducements for industries, especially woodworking establishments.

W. E. WOMBLE, Secretary-Manager.

Coal and Timber Resources in Eastern Kentucky.

[Special Correspondence Manufacturers' Record.]

Pikeville, Ky., July 8.

By the extension of the Chesapeake & Ohio Railroad from White House to Elkhorn City there has been opened to development an entirely new and vast field of the best steam and coking coal, unsurpassed in Pennsylvania or anywhere, and there has also been made possible all the activities which usually accompany railroad construction into a country heretofore isolated and undeveloped, but rich in timber and other resources. The conditions here are of large commercial significance, and are interesting from every point of view.

With the world's consumption of coal so enormous today that even cool-headed statisticians are startled and well-nigh bewildered by the marvelous showing; with the United States producing just a trifle under 1,000,000 tons of coal every one of the 365 days of the year—leading all the nations of the earth in output as well as consumption of this king of power and wealth-producers; with a demand increasing by such giant leaps that an annual production in this country of 500,000,000 tons is an imminent possibility, and even 1,000,000,000 tons a conceivable future possibility, there is evidence everywhere of such an awakened realization of the value and importance of coal fields as has never been known before in the history of the world. This fact I strongly encountered in Pittsburg, whose big corporations and individual investors have turned their eyes from the diminishing fields of Pennsylvania to the largely-untouched deposits of West Virginia and the South; and down in this hitherto inaccessible region of Eastern Kentucky there are even more striking proofs of the coal-hunger that prevails. In the remarkably accelerated development of the West Virginia coal fields there has been a notable railway construction, both of branch roads and new lines; here in this section there is seen the more extraordinary spectacle of \$4,000,000 being spent on a road but 76 miles in length, whose construction at this time was brought about almost solely as a feature of the development of a coal field from which not one pound of coal has as yet ever been shipped. Such an expenditure would have been impossible a few years ago; in fact, projectors of a system of which this road would have been a link spent themselves and their substance in a vain effort to interest capital in the enterprise. Today, however, so keenly alive are financiers and railway builders to the growing importance of first-class coal fields that there was seen a regular scramble, with months of hard-fought battling in the courts, to determine to whom should be accorded the privilege of building one of the most expensive pieces of roadbed in the United States, because such a line would command the Elkhorn coking coal fields, yet to be developed. Nothing could more clearly demonstrate the changed attitude of capital towards coal production and the vastly-increased importance of coal lands than this situation, for the superiority and extent of the coal measures of the Elkhorn field have been known for a decade and more, and yet during most of that time not only would no capitalist listen to propositions for railroad construction into the field, but the properties themselves were so lightly regarded that owners could hardly get a loan on them sufficient to pay one year's taxes. Now every facility is being afforded the development of this vast and rich field, and it will be a question of but a short time till Elkhorn coal and coke are known and used in all the markets of the country, and such a development will occur as will make the

valley of the Big Sandy one of the most prosperous and widely-known sections of Kentucky.

For the present condition of development here the Big Sandy Company is directly responsible. Owning 130,000 acres of the choicest coal lands in the Elkhorn district, it is the largest individual holder of Pike county coal lands, while the very strongly backed Northern Coal & Coke Co. is owner of 250,000 acres and has 50,000 other acres under contract; its lands extend into several of the adjacent counties, while those of the Big Sandy Company are all in Pike, and are mostly in one compact body.

The Big Sandy Company is a \$5,000,000 corporation. The president is Charles E. Hellier of Boston, and with the exception of Ralph A. Hellier, general manager, who has been here for the past 10 years, all the officers, directors and even small shareholders are residents of Boston. Among the principal stockholders are Wm. A. Paine, president of the Copper Range Co. of Michigan; Robert M. Morse, the Weld Estate, etc., all interests which stand for substantial strength in Boston financial circles. The properties constituting the present holdings were first bought up by various Northern parties on account of their coal and timber possibilities and because they were cheap, and since the present owners entered the field, 12 years ago, the tedious work of consolidating the ownership has been in progress, while meantime plans were being perfected for railroad construction and the opening of the mines. Formerly the company was called the Elkhorn Coal & Coke Co. The name was changed to the Big Sandy in 1902, and the same year negotiations were begun with the Chesapeake & Ohio Railroad Co. for an extension of its Big Sandy division, then in operation between Catlettsburg and White House, a distance of 52 miles. The C. & O. had some years before bought the section of the Old Three Company road built and in operation between White House and Richardson, a distance of eight miles, and it had previously acquired the Ohio & Big Sandy, or Chaterawah road, running between Catlettsburg and Richardson, with the intention of pushing the line into the South through the Eastern Kentucky coal fields when the time was ripe. Under contract with the Big Sandy Company, the construction of the extension to Elkhorn City was begun about three years ago. Track has been laid to the mouth of the Marrowbone creek, and will be completed to Elkhorn City, eight miles further on, before the end of July. The first passenger train was run into Pikeville June 5, and into Marrowbone, or Regina, as the station is called, on June 28. At Elkhorn City, which is just this side the famous Breaks of the Big Sandy, the C. & O. construction will stop. At the Breaks there are no evidences of an intention on anybody's part to build through at once. From newspaper reports and the declarations of parties in interest, as well as from the history of the situation, it is unquestionable, however, that within a short time such a road will be built.

Around no spot in the South has so much railroad interest centered nor so much warfare hovered as at the Breaks of the Big Sandy. Here, through a narrow gorge, whose perpendicular walls rise on either side to a sheer height of 1000 feet or more, is the only pass through the Cumberland mountains outside of Cumberland Gap. It has always been regarded as a point of vital strategic importance to any railroad designed to connect the Carolinas with the lakes, and it was through

here that the well-conceived but misfortune-ridden Charleston, Cincinnati & Chicago Railroad had planned to build. When that bankrupt enterprise was dismembered and parcelled out for sale a small section of it fell into the hands of Geo. L. Carter of Bristol, and with that nucleus he and interests represented by him began work on a project to go on through the Breaks into the great Elkhorn coal fields and up to the Ohio river. When the C. & O. entered into contract with the Big Sandy Company to extend the line to Elkhorn City a rush was made by the C. & O. to get through the Breaks and beyond. A hundred thousand dollars was spent in locating and grading a line, and at the same time the Carter interests were spending thousands of dollars in field and construction work, and litigation was commenced by both parties in the States along the line. After nine months of warfare the C. & O. got the best of it in Kentucky, while the Carter interests were victorious in Virginia. It is the general belief that some sort of agreement was then made by which each side was to peacefully retain the trophies of the fight—that the C. & O. was to build no further than Elkhorn, while other interests were to build through from the south, each to have the benefits of a trackage arrangement for through trains to all points reached north and south.

There is vast activity among railroad men of large and small degree, and fresh claims and announcements regarding intentions are printed almost every day. These manifestations are especially interesting and important as showing the great value now attached to the coal fields of this section. Just how many of all the reported plans of railroad construction in this district will materialize remains to be seen. It is exceedingly costly to build railroads through and around these mountains. Going through the Breaks it is estimated that the grading alone would cost \$100,000 a mile, as the road much of the way would have to be blasted out of a wall of solid rock in a sort of half-tunnel fashion. It is conceded that but one road can be built there, as only one side of the Breaks is available. Along the river—Russell fork on the map, but called locally Big Sandy all the way—there might be a road constructed on the west side of the river opposite the side used by the C. & O. But having a choice, the C. & O. took the easiest and best, and even at that it cost \$4,000,000 to build the 76-mile extension, excepting what was spent on improving the road between White House and Catlettsburg, not a large portion of the amount. It is easy to believe that all the roads of the South would like to get into the Elkhorn coal fields, and there is plausibility in the projects announced having that end in view. Without now taking up each case separately and in detail, it may be stated as altogether in keeping with the logic of the situation and in harmony with surface indications that the Blair-Ryan-Coolidge syndicate, which has bought the Carter interests in the South & Western road, in operation between Johnson City, Tenn., and Spruce Pine, N. C., together with the Clinchfield coal properties, will carry out the Carter plans of building on through the Breaks of the Sandy in one direction, and in the other to a connection with the Seaboard Air Line, which the Blair-Ryan syndicate owns, at some point in North Carolina. Thus there would be secured to the Seaboard the great advantage of access to the Elkhorn coal fields and to the cities of the North, and through connections with the C. H. & D., Detroit, Toledo & Ironton (formerly Detroit Southern), Erie and Big Four roads a new and most direct trunk line would be established between Cincinnati, Chicago, Cleveland, Pittsburg and other cities of

the middle West and the Carolinas, Georgia and Florida.

The activities of the various interests which promise at least a considerable construction of road to develop not only the Elkhorn fields, but those of Wise, Dickinson, Buchanan and other counties across the border in Virginia, are significant as showing the wide extent of the present interest in Southern coal lands. For present development purposes, however, the Elkhorn coal fields are more directly concerned with construction and connections from the North, and not only because the C. & O. has already built in here (and there are no lines in from the South yet), but also because the great market for the Elkhorn coal and coke must be found for some time in the North and West.

For these reasons the plans and purposes of the Hollins-Zimmerman interests are of much interest and importance to this section. At Ashland a franchise has been obtained for a bridge across the Ohio, and some \$30,000 or \$40,000 has been expended in the purchase of railroad terminals. These transactions are all made in the name of a local attorney, as trustee, but the accepted opinion is that he is operating for the C., H. & D. and Detroit Southern interests, and report has it that these interests will extend from Ironton to Ashland, and will co-operate in the construction of a line of road on the east side of the Big Sandy, from the river's mouth opposite Catlettsburg to the State line at the Breaks. The Northern Coal & Coke Co., in which it is reported that Zimmerman & Hollins have extensive interests, has filed a survey for such a line under the title of the Miller's Creek Railroad, and it also has surveys filed for lateral branches up Beaver creek, Shelby creek, etc., which would open up a large section of the company's coal properties. So confident are the people of Huntington that the Hollins-Zimmerman interests are contemplating the construction of a line into the Elkhorn coal fields that they are hard at work trying to induce them to leave the main line 32 miles north of Huntington, at the Sims creek crossing, cutting out Ironton and following down the creek to the Ohio, opposite Huntington, then crossing over and coming from Huntington down the Ohio to the Big Sandy, then down the Big Sandy to the point where they would branch off to strike the holdings of the Northern Coal & Coke Co. Whether the Zimmerman-Hollins interests adopt either of these routes or choose another mentioned route from the Ohio at Riverton up the Little Sandy and across to the Levisa fork and then into the Elkhorn field, or whether they will simply build a bridge at Ashland and make a traffic arrangement with the C. & O. are matters on which no definite announcement has yet been made by anyone in authority. Owing to the cost of constructing roads through a mountainous country, and for the reason that financiers are not over-eager to buy the bonds of any road paralleling another into a largely undeveloped country, it seems a good guess that the C. & O. will be the only line into this section from the North for some years, but that traffic arrangements with other roads will be effected, so that the Elkhorn fields will practically have access to all the roads that touch the Ohio river.

Through the ability and foresight of George W. Stevens, president, and Decatur Axtell, vice-president, of the C. & O., the construction of the Big Sandy line has been of the very best; in fact, it is doubtful if any division on the main line can surpass it. All the bridges are of steel, the abutments of stone and massive construction, the culverts of stone and concrete, the rails 75 pounds and the track gravel ballasted. It is built for heavy traffic, and as the fall between Pikeville

and Catlettsburg is only 10 feet to the mile, and between Elkhorn and Pikeville only 25 feet to the mile, the grades both ways are exceptionally low, while the down grade or coal haul from the Elkhorn field to the Ohio river is an especially favorable one.

This much for railroad transportation. In addition, there is the advantage of water transportation on the Sandy as far up at least as Pikeville now available several months in the year for steamboats and barges, and to be given a permanently reliable character for 9 to 10 months every year by the completion of a system of locks and dams already begun and included in the general congressional plan of improving the Ohio and its tributaries. Locks and dams have been completed at the mouth of the Big Sandy at Catlettsburg, at the mouth of the Levisa at Louisa and at Wright's, halfway between. The government has recently located three others, one of them on the Levisa and another on the Tug, just above their junction. When all the improvements are completed as contemplated there will be slack water on the Tug as far as Williamson and on the Levisa or Big Sandy as far as Pikeville, if not further. Even with reliance on rains for a navigable water stage there has been a river traffic of some 500,000 tons a year, and 25,000 passengers have been carried in a year. It has been pointed out that the Mississippi will be the main feeder of the Panama canal, and that the Ohio and its tributaries will be the main feeders of the Mississippi. With the development of the Elkhorn coal fields the contribution of this section to the domestic and export trade by these routes will unquestionably be of much importance.

There will be no delay in the development of the properties of the Big Sandy Company. Coincident with the arrival of the long-talked-of railroad into this section the company has perfected all the time-consuming and tedious preliminary details, and within a month operators will be at work in the fields. The first development will be along the Marrowbone creek, where there are some of the finest properties the company owns. An eight-mile branch road is being built up Marrowbone creek from the main line, the Big Sandy Company paying part of the cost of construction. The branch will be completed within six months, and with spur tracks to the various openings adjacent a very important section will be well opened up, including not only the Marrowbone fields, but the Flatwoods district as well.

Since the announcement made in the MANUFACTURERS' RECORD by the Big Sandy Company of its intention to open up its properties by the construction of a railroad and of its purpose to lease lands to operators, inquiries have been received from every part of the United States, so the company has been able to make a choice of lessees, with the result that those closed with are large operators with a wide experience. Those signed with who have already made locations, and who will get started earliest, are operators from West Virginia and Pennsylvania. Some Alabama operators will be in the field within 60 days, and all of them expect to be shipping coal by the first of the year. For the present activities will be confined to the Marrowbone, where 16 to 20 operators may work to advantage for an indefinite number of years. It is calculated that inside of five years they ought to be taking out 2,000,000 tons a year from the mines of this creek, and that at this rate the Marrowbone district would last 150 years. As rapidly as occasion warrants the company will open up other territory by the construction of lateral lines and spur tracks, until the whole field is under development.

There have been numerous reports of a technical nature made by government, State and individual engineers, geologists and mining experts, and copious extracts printed in the MANUFACTURERS' RECORD and other publications have quite generally familiarized the interested public with the superior character of the Elkhorn coals. Suffice it to say at this time that numerous analyses and exhaustive tests show the coals to be "in percentage of sulphur and phosphorus perhaps purer than the best, while in ash their average composition is entirely favorable," as is unhesitatingly declared by E. V. d'Invilliers, geologist and mining engineer, of Philadelphia, who made a thorough examination of the properties a couple of years ago. There appears to be no question of the superiority of these coals for coking purposes over those even of the Connells-ville district, and all the operators in the district are talking about putting in coke ovens, the intention being that coke-burning shall go hand in hand with the mining of coal. "It is by no means prophetic," declares Mr. d'Invilliers, "to foresee a period of the greatest mining activity in this Elkhorn district, or to picture the immediate valleys of the Russell and Levisa forks lined with coke ovens, the raw coal from the mines fed directly to them by short lateral railroads and the manufactured product loaded into barges for delivery to the furnaces and smelters of the Ohio and Mississippi valleys with but a single handling."

It is the intention of the Big Sandy Company to assist its operators in finding the best markets for their product. Mr. Paine of the directory is, through his Copper Range Co., a consumer of 300,000 tons of coal a year, and will naturally be interested in seeing a large consumption of the Elkhorn coal. The Big Sandy Company is in correspondence with the by-product plants of the large cities, which by the sale of gas and other by-products can pay the cost of the manufacture of coke and have the coke as a clear profit. As gas is so large a part of the by-products, the operation of such a plant away from a city or an iron furnace is not practicable. It is probable that sales of coal to by-product plants will become an important part of the company's business. Some inquiry has been made looking toward the establishment of a by-product plant along the State line, where on Pine mountain there is a limestone ledge from 200 to 300 feet thick, and where there could be located a furnace to treat the Virginia iron ores found in great abundance nearby, utilizing the coals of the Elkhorn fields. It has long been the opinion of investigators that a large iron-manufacturing center would be developed somewhere in this section of the Appalachian range, and it is within the bounds of the possible that the development of the great Elkhorn fields will bring that event to pass.

What the effect of the development of the 400,000 or more acres of high-grade coking, steam and domestic coal in the Elkhorn coal field will be on the fields to the north and south which have already been developed it is difficult to foresee. While it is true that the Elkhorn coals can probably be mined and marketed cheaper than any other coals in the country, yet the growth of the coal consumption is so great that it is probable that there will be demand sufficient to keep all of the coal fields well occupied, although the fortunate owners of the Elkhorn field should profit to a great degree by reason of the superior quality of their product and the greater economy with which it can be mined.

It is purely speculative to attempt to figure on how much coal there is in the lands of the Big Sandy Company. After being 10 years on the ground, and having

given the matter constant and careful consideration, Mr. Hellier ought to be as well qualified as anyone to express an opinion. He declares it as his belief that the 130,000 acres his company holds will average 10,000 tons to the acre, giving the startling total of 1,300,000,000 tons. There are six seams on the property, the two principal ones and the ones of greatest persistency being the Upper and Lower Elkhorn, separated some 160 to 200 feet in column. The coal in these seams runs from four to eight feet in each. The other four seams vary, but are workable over large areas, running at places to a thickness of four and five feet. Then in addition there are 4000 acres on which occurs what is known as the Flatwoods seam, where the coal has shown the phenomenal thickness of 17 feet at some of the openings. As the valleys were caused by great erosions, the coal seams are all above the water line, and the formations so lie that the mines will be self-draining and adapted to very economical operation.

The Pike county holdings of the Northern Coal & Coke Co. are very similar in character to those of the Big Sandy Company, and when they are developed will greatly add to the prestige, fame and activities of the Elkhorn district. Ex-Senator J. N. Camden of Parkersburg, W. Va., was president and the largest stockholder in this company, but it is reported that his interests have been purchased by C. W. Watson, the big operator of Fairmont, and it is stated that the Hollins-Zimmerman interests have taken about a million dollars' worth of the stock. John C. C. Mayo of Paintsville, Ky., is the promoter of the enterprise, and has already received a substantial reward for the persistency with which he swung to his holdings and clung to the idea that the Northeastern Kentucky coal lands would become very valuable some day, although meantime for years it was almost a starving game to hold and wait.

The Virginia Iron, Coal & Coke Co., of which Henry K. McHarg of New York is president, owns a tract of 21,000 acres of Elkhorn coal lands, almost surrounded by the lands of the Big Sandy Company, and practically of the same character. No development work has been undertaken there, or anywhere else in the field, in fact, except by the Big Sandy Company, but the completion of the C. & O. road is expected to start development work in all directions. It is declared that this railroad construction will make possible the development of 500,000 acres of coal lands in the Big Sandy valley, in the counties of Floyd, Johnson, Knott, Letcher and Pike, half of it in Pike, fully 50 per cent. of which is coking coal, which suggests a prospect of future activity and wealth production wholly impossible to compute.

Outside the Kountze Bros.' holdings of a 40,000-acre tract on the waters of the Tug, which is rather outside the Elkhorn field, and has mainly the Thacker and East Lynne coals, the other coal lands of Pike county are largely in the hands of the large companies, which are believed to embrace the cream of the field.

In connection with the tremendous development which is certain to speedily come to the valley of the Sandy through coal and coke production, there is a wealth of timber resource here which is full of promise in the way of many kinds of wood-working industries. True, there has been a logging business in full swing all up and down the valley for 50 years or so, the trees along the watercourses having been felled and the logs rolled into the streams to be rafted or floated singly down the river at high water to mills at Cincinnati and other places along the Ohio. It is estimated that an average of 73,000,000 feet a year is thus shipped out. This has

resulted in the culling out of many of the larger poplar and hemlock trees. The big walnut trees were very generally bought up by the Singer Sewing Machine Co. 25 years or more ago. Some very interesting facts are related in connection with the disposition of the walnut trees. I will not here attempt to tell of the peculiar civilization found in the mountains of Kentucky. It is enough to mention that the hardy mountaineers gaining a meager sustenance from the cultivation of a hillside farm laid against a mountain at an angle of 45 degrees, and no steeper only because the attraction of gravitation makes a sharper angle an impossibility where there is soil or movable matter, welcomed the timber buyer in those early days as the "money-crop" man they were looking for. From the beginning of the last century the "sang" digger and the "fur" producer, the man who skinned coons and occasional bears, had been the only ones who provided an article which could be exchanged for money. When the "sang" gave out and the wild animals had been exterminated it was gloomily figured there would be nothing else found in the hills for which people would pay cash. When the timber man came along and offered 25 cents apiece for walnut trees the owners jumped at the offer, but not without a sly suspicion that they were taking a mean advantage of a stranger. Those who survived saw the day when walnut trees went to \$5 apiece and more, and later a stump of such a tree brought from \$25 to \$50, so valued because the roots furnished a particularly prized curly grain. The record on walnut trees remained to be furnished by a case in Floyd county adjoining, when a fine walnut tree 40 inches across and 40 feet to a limb was put up at public auction, and though 30 miles from a railroad, it was much bid on and was finally knocked down at \$1500.

The walnut timber, never in great abundance, has been largely cut away. In the main the logs have gone to market at varying prices, but some of the natives relate that in its passing, when all the timber in a patch was cut off to make room for the hillside farms that never should have supplanted the forest growth, there were features of old-fashioned log rollings like the early settlers of Indiana used to tell about, when in the process of making a clearing the neighbors would gather round and great logs of walnut, poplar, oak, ash and beech would be heaped up and set on fire. There are also reminiscences of walnut logs split up for rails, and even recollections of walnut sticks of firewood, popular with the chopper because they split so easily. There are walnut trees in the forests covering the mountains about the Sandy today, but they are pigmies compared with the giants of those earlier days, and even the poplars, which succeeded in public favor after the walnut era, have been largely taken away. All up and down the Sandy there may be seen today the logs which have been cut at various times during the past three years, and in the Breaks of the Sandy there are 40,000 logs which have failed to come through because no high water has occurred for three years past.

With the advent of the railroad there will doubtless be a lesser reliance on the clumsy and costly method of floating and rafting through a rocky river. There will also unquestionably be developed on the ground a greater manufacture into merchantable lumber of the timber that remains. There are now nine saw-mills on the Marrowbone creek, six of which have been put in since the C. & O. road was started, and others will be built. Where undisturbed the timber growths here are continuous, and forests will reproduce themselves. Some varieties of timber

never have been cut out, and over vast regions there are great growths of white oak and chestnut, with occasional tracts of linden and other inexhaustible varieties, including hickory, and there is, too, some poplar and less walnut in places, mostly of smaller size, and an estimate of not long ago is that out of the 850,000 acres drained by the Levisa and Russell forks there is 25 per cent. of the territory that should still warrant an estimate of 5000 feet of timber per acre, principally of white oak and chestnut. These timbers are especially adapted to the manufacture of furniture, and there is no appreciable reason why there should not be many furniture factories established at such places as Pikeville and Elkhorn City, each of which is peculiarly situated with reference to the development of a good-sized city—a condition not always met with in this section of predominating hillsides and the narrowest of valleys, as a rule.

In sizing up the possibilities of an industrial development in this valley it seems likely that there may be all kinds of wood-working plants at this place—furniture factories by the score, spoke and handle factories, wagon and carriage factories—and foundries, machine shops, repair shops and all the train of other industries that follow in the wake of any active industrial development. Pikeville is the present metropolis of Eastern Kentucky, with a population now of some 1500 people, and there are such public conveniences as water-works, electric lights, sewers, ice plant, etc., and the possibility of a permanent leadership for this section in both commerce and manufacture.

There are other sites for towns between here and Elkhorn City, but the lay of the land, together with other surrounding conditions, suggest the probability of Elkhorn City standing next to Pikeville as the most important industrial and trading center in this valley. Each should make a good-sized city, and with proper co-operation on the part of the people now here their growth should be rapid and continuous.

Pike is a large-sized county, but it is nevertheless a surprise to learn that there is a population in the county of 25,000 people. They are mostly of native stock, originally largely emigrants from Virginia. They are conspicuously industrious, else they would have starved to death in the attempt to wrest a livelihood from their "perpendicular" hillside farms. Their development may leave much to be desired, but they have sturdy traits of character, and they will supply a large working force for any industrial activities that may occur.

Generally speaking, there is apparent here the beginning of a great industrial development, founded primarily on the immense coal and coke production that is now in sight. Following in its train there should be a development of the timber interests as great as that which has occurred at High Point, for example, the phenomenal North Carolina town that has come up from a listless village to a city with 56 factories of various kinds.

There is an abundance of fine building stone, and there are numerous lines in which industrial activity may profitably be engaged. Although borings fail to develop the presence of the petroleum which is found in the neighboring county of Floyd, natural gas in considerable quantities has been found, and it is thought a flow might be developed on a commercial scale. However, the known and proved resources are sufficient to support the largest kind of an industrial development throughout this valley, and all that is required now is energetic initiative and strong co-operation to make this one of the busiest and most prosperous sections that can be found.

ALBERT PHENIS.

Kentucky-Tennessee Oil Fields.

[Special Cor. Manufacturers' Record.]
Barbourville, Ky., July 10.

The aggregate production of high-grade crude oil in the Kentucky-Tennessee fields for the past six months is 579,531 barrels, an increase of 170,799 barrels over the production of the first six months of 1904. This output was made by the following counties: Wayne, Cumberland, Knox, Whitley, in lower Kentucky; Wolfe, Estill, Bath, Rowan, in upper Tennessee. Wayne county produced more than half the total amount. All this output was the lighter grade oil except that produced in the Bath-Rowan county field, which is a heavy-grade article and commands a lower price than the lighter grade. The prevailing low price of oil this year will lower the revenue from oil production, although the output has steadily increased. The average price paid by the Standard for Kentucky-Tennessee crude during 1904 was 99 cents per barrel, the highest price being \$1.33 per barrel, which was reached the earlier part of last year. The price commanded now is 75 cents per barrel, the lowest in the history of the field, and there is little indication of an early advance.

The cheapness of oil has united with natural conditions to discourage development during the past few weeks, but the June production was the highest in the history of development, aggregating 136,607 barrels, and indicates a healthy condition of the industry.

A great impetus has been given development in the lower Kentucky fields, along the Tennessee line, by recent big producers. Several rigs have now been started in the vicinity of the recent 500-barrel gusher in Wayne county, and efforts will be made to further the extension proved by that strike. During the past week 12 new rigs have been erected in territory contiguous to the new strike.

Strikes in Kentucky during the past week aggregated 15, while three of the non-productive class were drilled during the same time. Work in Tennessee is rather quiet, and nothing has been accomplished for several days. Completions in this State were made in Wayne, Cumberland and Wolfe counties.

W. S. HUDSON.

Petroleum for Cotton-Worms.

The recent experiments with petroleum for the destruction of the cotton-worm upon an area of land near Aboukir have caused the ministry of the interior to investigate the subject, and several experts have been appointed for this purpose. It is claimed for the remedy (says the *Westminster Gazette*) that two or three aspersions of the land with petroleum at the early stages of the cotton growth suffice to exterminate the pest completely. The petroleum is applied in small quantities in conjunction with irrigation waterings and immediately subsequent to them. A film is formed upon the surface of the soil, which is said effectually to deter the female moth from alighting thereon, and should there be larvae already these are instantly destroyed by the pungency of the petroleum. If its effect is so decisive as is claimed for it, the simplicity, slight cost and the perfect harmlessness of petroleum to either plant or soil should commend a trial of the method wherever more elaborate remedies on cotton plantations have failed to eradicate the disease. The result of the inquiry by the Egyptian government will therefore be awaited with interest.—*Textile Mercury*.

The Cartersville (Ga.) Chamber of Commerce has issued a booklet calling attention to the opportunities for investment of money and energy at Cartersville and in Bartow county.

THE PRESENT STATUS OF THE PANAMA CANAL.

By C. F. Z. CARACRISTI, C. E., E. M.

[Written for the Manufacturers' Record.]

The past few years have revealed to the interested world new and important pages of Isthmian canal history, and the lesser degrees of a prospective arc have been described with alternate accuracies and failures. Since the master work of modern and ancient engineering science has been entrusted to American skill unforeseen events and obstructions have appeared to retard the legitimate progress that we had justly anticipated and even mentally forestalled. So fixed was the hope of immediate gain, in the Gulf States at least, that fabulous advances in real-estate values found tangible expression at Pensacola, Mobile, Gulfport, New Orleans and Galveston. But today the whole nation, and particularly the press, the natural medium of public thought and expression, is bewildered by the unrest of interrogation. The questions which naturally arise are: Are the delays and disturbances that find utterance in the public press as well as in private circles the result of political intrigue, the antagonism of powerful railroad influences or the outcome of fortuitous and unavoidable calamities?

It cannot be successfully denied that the patience of our country's undisputed veto power—the power of public verdict and interest—has been and is sorely tried to such an extent that national concern looks askance to the administration for assurances regarding the hidden powers that have apparently obstructed, with such unrestrained success, the legitimate and justly expected prompt execution of a labor for which vast sums of the people's money have been appropriated and spent.

It may be possible that the administration may be able to commune with itself in peace, and in time offer ample and justifiable reasons for acts that, to those not in its confidence, definitely appear as a premeditated policy of unreasonable procrastination, if not willful and premeditated obstructionism and delay. The American people, endowed as they are with that high degree of intelligence that has made them personally responsible for the acts of their government, and each a sovereign over his own convictions, have the constitutional right to ask and receive the confidence of the administration they have created, provided its publication does not affect the national honor or injure foreign policies. There exists no plausible reason why the truthful facts surrounding every detail of the progress or delays in the execution of the Panama canal project should be "star chamber" or misrepresented. The administration has no legal nor moral right, either toward its own people or the world at large, to tolerate avoidable delays, stimulate and support by petty jealousies or assume dictatorial arrogance toward the executive head of the Panama canal in order to force his resignation.

It would be presuming on public indulgence for me to attempt to defend Chief Engineer Wallace's action in resigning, as the American people will eventually see in it only something similar to the cases of Admiral Schley and General Miles. The President is not dealing with New York police force nor with the officers of the United States navy and army when treating with American engineers of high reputation, because they are not dependent for a livelihood on his patronage and consideration. The sooner this becomes an understood fact the earlier will we enjoy the accruing benefits of an interoceanic canal constructed upon scientific principles and at a low cost of construction.

The critic's eye, that microscope of wit, Examines thread by thread and bit by bit.

Criticism should not be uttered without a just regard for the rights of others, nor as the result of predisposed opinion or ambition; it should be founded upon a rightful consideration for all men and the argumentative logic of the claims of those exalted or condemned. It would be a reprehensible error to impute to the administration, the canal commission and the executive engineer unjust motives or want of good faith and ability unless such condemnation is based upon actual evidence either direct or overwhelmingly circumstantial. Let us start out by asking, What has the administration done since November, 1903, except to appoint expensive commissions, one of which fell from presidential grace because of that power's impatience?

If the administration believes that professional men of high standing are ready and willing to submit to the bantering vagaries of the President and his pet Cabinet officers or to tacitly accept, as a matter of fact, the treatment of a Washington government clerk, it is very much at fault, and the sooner the whole responsibility of canal construction is transferred to engineering corps of the United States army, that of late has grown accustomed to the weaving of standard red taperies, the better will be the results achieved. But if we are to build the Panama canal upon business principles, founded upon practical scientific methods and experience, we should allow the Isthmian Canal Commission, which undoubtedly is composed of some of the ablest men in our country, a free and independent hand, and the executive chief engineer exactly the same latitude and consideration that would be granted him in a like position in private life.

To be perfectly plain, the work should either be irrevocably placed in the hands of our able army engineers (to satisfy the administration's hankering after interference) or totally transferred to civilians. Experience has long since taught, and the lesson is of great intrinsic value in the present crisis, that the government cannot and never has successfully executed a great engineering work of public utility without civilian contractors and other outside aid. Even in small engineering undertakings government work has cost far in excess of current prices.

While the rules of strict subordination imposed by the government on its executive employes is laudable and may be enforced, at least apparently, in its local clerical forces and the army and navy, this cannot apply to civilians of high professional attainment who have no political aspirations, nor even to the independent American artisan and laborer. This condition is particularly true in a period of popular prosperity, when our domestic demands upon this class of our citizens' labor is greater than the available supply. With ample employment at home, where labor need not leave its own fireside and undergo the necessity of being separated from families and the expenses of living in a foreign country, it is doubtful if it will undertake the terrible hardships of a tropic climate, to say nothing of the risks incidental to a life on the pestiferous Isthmus of Panama. I found that at present the housing of a vast army of employes on the Isthmus, even though good labor at reasonable prices should be obtainable, is entirely out of the question, as no provisions have been made upon a sanitary basis. Such labor as is now at work on the Isthmus would not stand muster in the States, even at one-half of the prices paid. With rare exceptions, outside of

the high officials, the 1500 Americans working on the canal zone are there as a matter of last resort or out of a spirit of foolhardy curiosity and adventure. When the crucial time arrives and labor will be needed in corresponding abundance to the magnitude of the undertaking, prices for good men will probably be 100 per cent. higher than at present.

The principal reason for delay on the canal work is the absolute want of organization and harmony on the Isthmus. There is one exception to this statement, and that exists in the health officers' department. The curable condition of disorganization can be remedied by letting the work by contract in small sections. If this is not done no organization will ever last beyond its experimental stage. The absolute impracticability of successfully building the canal directly by the government at anything like a reasonable cost has already been demonstrated, and as more difficult problems are presented stronger and more convincing evidence of this statement must pass the willful censorship of the representatives of the American press on the Isthmus and reach this country with alarming details, and, may reform forbid, probably accompanied by scandal.

There is nothing impractical about the canal undertaking from an engineering standpoint, and the accomplishment of this vast work rests simply on the Isthmian Canal Commission settling upon a definite plan of operation to be executed by contract under the untrammelled supervision of the chief engineer in charge.

The resignation of Chief Engineer Wallace, one of the world's most competent engineers, and the best man for the position owing to his seasoned experience on the Isthmus and knowledge of local conditions, removes the name applied by his enemies on the Isthmus of "the Illinois Central annex canal."

Reports have had wide circulation to the effect that Mr. John Finley Wallace, the chief engineer, was influenced to resign by the transcontinental railroads. Such a statement can be contradicted upon the strongest authority possible to reach. It is wholly unfounded, and was inspired through the very same influences that forced upon him the necessity of either resigning or becoming subordinate to the will of people whose desire it is and has been to dictate policies and interfere with professional work of which they are nobly ignorant in order to foster interests that would advance certain politicians in their ability to despoil the national treasury. This does not mean to say that anything illegal has been accomplished, but a glance at some of the specifications for canal supplies indicate the unmistakable handiwork of astute manipulation, the object of which was to debar open and free competition in the bids for canal supplies. When I left the Isthmus the professional "go-betweens" had already put in their appearance, and it was an open secret that the crowd that was after the "plums" simply on "influence" had been given no encouragement, and that the chief engineer would resign if interference continued in his branch of the work.

Under the existing system the work of construction will never be completed, but it is natural to suppose that the American people and the canal commission will not tolerate the continuance of a policy of apathy and disorganization. If this is not suppressed there is but little opportunity for an interoceanic canal. The crucial and insurmountable past and present conditions do not arise from the lower officials that could be easily replaced, but have their origin in the highest official quarters, and naturally percolate downward to the smallest foreman, until a chronic state of revolt is found in nearly

every department of the operative force on the canal zone. It was this same sense of personal irresponsibility and official quarrels and jealousies that made the robberies and mismanagement of the old French company possible and effective.

A more deplorable condition could not exist than a vast project which under the strictest economy will cost, not \$145,000,000, as originally estimated, but between \$365,000,000 and \$400,000,000, including purchase money and a sea-level waterway, without harmony and a responsible executive head. Under no system in the world would such a stupendous undertaking be attempted without a responsible head, and if Mr. Wallace did demand to be placed in sole charge of the construction, he did that which any man of his ability justly should have done, and his resignation is a laudable act that not only reflects credit on his own and his profession's self-respect, but which will also force the President and his Cabinet to look upon the proposition in an entirely different aspect unless he has made up his mind to be the "whole thing" himself.

The deficiency in all the canal estimates rests upon the want of experience in doing work in the tropics, the optimistic views taken relative to labor conditions and the haphazard way of making the surveys by the French company. Too little allowance has been made for the difference of cost between excavation in the United States and Panama, and a total disregard for climatic conditions seems to have been another error.

The cost of excavation during the month of May, exclusive of salaries to the commission, management and incidentals, was 56 cents per cubic yard with labor at \$1.83 per day. It is not stated whether this is for earth or rock excavation, but experience on the various railroads of Costa Rica and Colombia shows that the average cost of earth work is 60 cents per cubic yard, as against 24½ cents in the United States with labor at \$2 per day; rock work costs from 85 cents to \$1.38 in the tropics, as against from 66 cents to \$1 per cubic yard in the States. In this estimate I am dealing not with machine work, but hand labor in handling dirt and soft rock that does not need blasting. In this country by machinery the work that is being done on the Isthmus could be done for from 7 to 10 cents per cubic yards for dirt. The maintenance of excavating and all other machinery and cost of skilled labor is so high that the price will be at least 300 per cent. greater on the canal zone than in the States. If the cost of superintendence and management, etc., is added to the price of excavation, as it done in every private undertaking, the 56 cents per yard cost reported will be very largely augmented. Although the cost seems to have created considerable dissatisfaction to the canal officials, they should be congratulated that it is not greater. An injustice is done the canal commission by the statements published that only 70,000 cubic yards of excavation was executed during the month of May. It is to be presumed that this, too, was given out by interested parties to reflect on the engineering department. Why did those from whom this statement emanated forget to say that the rainy season had set in: that the laborers did not work much of the time, and that the increase in price of excavation was due to these causes? Under the circumstances I am surprised that even this much was accomplished, particularly in dirt work, which absorbs from 25 to even 40 per cent. in weight without adding to the cubic measurement. This fact is shown by an analysis of the hauling charges, that jumped from 7 cents in February (the dry season) to 22 cents per yard in May (the rainy season).

The work of dredging, of course, is

much less costly, and not affected by the rainy season, except the washing of the embankments.

The canal commission's report of 1903 placed the excavation of a lock canal at 94,000,000 cubic yards, basing their estimates on the bills of quantities of the French company. On a sea-level canal I find that, outside of the work that can be executed by the use of dredges, we will have to excavate 115,200,000 cubic yards of earth on the heavy cuts alone. At the rate the work was done in May it will occupy over 137 years to accomplish the completion of the canal.

Another warning that should be called to the attention of the canal commission is the control of the upper Chagres and the diversion of its surplus waters by tunnel to the Pacific. This control is absolutely necessary in order to protect the canal and insure its stability.

When we consider that in the work of the New York Subway six years were occupied in advancing the plans alone, we should not look upon the present delays on the Isthmus with so marked irritation until some official statement is issued. We must remember that this is the dull season with the daily press, and that this fact accounts for much of the "stuff" that has found its way into the papers. An examination on the canal zone itself would reveal facts of importance to the public and show that what has already appeared only foreshadows what is to be expected.

But when we call attention to the fact that six years were occupied in elevating the New York Subway plans we may also be asked if the United States did not purchase all of the plans of the new and old French company, and why, with these in hand, the work has not advanced with more rapidity? The facts are that these plans, reports and specifications are in French, and that they may just as well be in Hebrew so far as the Isthmian canal officers are concerned. I could tell many ridiculous stories based upon these French documents wherein American officials on the canal try to make each other believe that they can read these reports.

With harmonious organization, headed by men acquainted with tropical labor and other conditions, the canal can be built within 20 years, or even sooner if let by contract.

After the canal plans have been settled upon definitely there is no argument for the further necessity of the Isthmian Canal Commission, and the whole work should be placed in the hands of one officer. Then the responsibility could be fixed and the great project controlled. As matters stand now this responsibility is foot-balled from one to another, and it is needless to add that "many cooks have and will continue to spoil the broth."

Six years' residence in South America and Panama convinces me that the sanitation of the Isthmus for American residents, except those from the highly malarial districts, is out of the question, even though every hygienic precaution be taken by the sanitary department. This department has and is doing everything within human reach, and deserves greater discretionary power than it now possesses. The yellow fever cannot be permanently eradicated, and even should this be possible its companion, the so-called "black-water fever," will not fail to reap its mournful harvest.

The complete sanitation of the Isthmus against yellow fever and its equivalent is beyond human reach, because of the transit and contact from persons coming from that section of Panama not in the canal zone and the transit of passengers from Pacific ports. At no time have I witnessed the Pacific ports of Colombia, Ecuador and Peru free from the deadly scourge. Only a few months ago two pas-

sengers that crossed the Isthmus from Ecuador on their way to Europe died of yellow fever on one of the French ships on which I was a passenger. Unless the United States government desires to involve itself in an international imbroglio, its representatives cannot legislate against foreign passengers in transit across the Isthmus nor detain them for the necessary quarantine. Such an act, although theoretically and practically in harmony with the laws of self-preservation, cannot be enforced as against citizens of a foreign country unless the malady is self-evident. Besides the risk of outside contagion, the fevers will be developed by the work of construction in the lower sections of the canal, where it crosses extensive swamps. This was the experience during the French construction period. Colonel Gorgas and Dr. Richard Edzard are doing all that human vigilance and professional knowledge could possibly accomplish, but verily they have a more gigantic labor before them than the canal construction itself.

Promptly on my return from Panama I uttered a warning to people against taking employment on the Isthmus, and as promptly was my statement of danger ridiculed in semi-official quarters. Events have fully vindicated my apparently pessimistic expressions.

The government of Great Britain, always alive to the welfare of its subjects, and there are many such on the Isthmus, publishes the following in its diplomatic and consular report:

"In 1896 the average mortality was slightly over 64 per 1000. Although this is considerably below the rate of 1888, when the canal encampments held an army of laborers equaling the present entire population of the city of Panama, and when, owing to their gregarious condition and the prevailing dissipation, epidemic diseases ran riot among them, carrying off scores at a time, nevertheless, it is sufficiently high to brand the district with a distinctive and invidious character for insalubrity.

"Of the deaths that have occurred, 29 per cent. are due to lung complaints, 18 per cent. to febrile attacks, 10 per cent. to dysentery, and the balance to a variety of causes.

"If further proof of the great mortality that prevails at Panama were wanting, the fact that with a dwindling population upward of 18,000 corpses have been received into the new Roman Catholic cemetery here since its inauguration in 1884 is of itself conclusive.

"Leprosy is another of the baneful scourges that have made the Isthmus their home. It is impossible to ascertain, even approximately, the number of lepers that infest the department, but, judging from experience, were the exact number made known the result would be, to say the least of it, startling. There is a lazar home for these unfortunates just without the city of Panama at Punta Mala, where a few of the more hideous cases are segregated from the rest of mankind, but it is a primitive affair, and its unfortunate occupants receive neither medicine nor medical attendance."

We must not forget, in taking into consideration the mortality on the Isthmus, that strongly misleading figures are issued. Out of some 9500 persons connected with the canal and railroad, about 1500 are Americans and about 500 Europeans. The rest are Jamaica and other West India negroes and people from the nearby Pacific and Caribbean coasts, all of whom are more or less immune to the local conditions and food. It is therefore evident that a mortality of, say, 38 per 1000 on the total would probably represent 60 or more per 1000 among the Americans and Europeans. I have seen the death-rate on the Isthmus reach 100 per 1000 per year

among foreigners, as against 24 per 1000 among the natives and West Indians.

Reviewing the sanitary conditions in one of the leading engineering magazines (1903), I made the following statement:

"Natives of the temperate regions cannot safely perform arduous manual labor under exposure to a tropical sun, and dependence for such work must be placed upon the negroes of the West Indies. White men can supervise, but must not attempt more.

"Considering the average figures for the past four years, with a personnel of 2275 on the canal, the percentage of disease has been 29.65 and the mortality 2.35 per cent. These figures do not exceed those on large works in any country.

"It should, however, be added that this personnel has been long on the Isthmus and is well acclimated."

As gratifying as the above conditions appear, it must be explained that I was dealing simply with the personnel of the canal, and that these people were all that were left out of 10,000 who had come on the works originally. They were absolutely immune. At the same time I did not state that during the same period (1890, 1900 and 1901) the Colombian government lost by death 3896 soldiers out of a total army of 8000 that was sent to the Isthmus from the interior.

I have now dealt with every conceivable condition that exists on the Isthmus, and from it any intelligent man can readily draw his own deductions. I have given the unpolished facts as they exist.

THE BIRMINGHAM DISTRICT.

Reports of the Establishment of New Industries.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., July 10.

All the interests in the market report a better inquiry and increased transactions in both number and volume. But the majority of the trades concluded are as yet confined to medium and small lots. At the close of the week there was some addition to the ranks of earnest inquiries, but as to results no favorable information has been given out. The aggregate sales were very fair. Among them was the lot for 10,000 tons, which in last letter was simply an inquiry. But the buyer and the seller finally got together at a price that neither will reveal. But by putting this and that together, the conclusion is that a guess at or around \$11 for No. 2 foundry would hit very near the price. It has come to your correspondent that a good lot of gray forge had changed hands at \$9.75 during the week, and the belief is general with the trade that about \$11 for No. 2 foundry would represent the selling value for a lot of 10,000 tons. The sales prices during the week have been very irregular. We know that sales were made as low as \$11.25 for No. 2 foundry, and the prima facie evidence is that some sales were made on a \$11 basis for No. 2 foundry, and it is almost openly stated that at least one interest was offering iron on a \$11 basis. But neither all the sales nor a majority of them were made at these minimum prices. One interest reports sales of 1000 tons on the basis of \$11.50, and we have reports of sales on the basis of \$11.75 and \$12. It is true that no one individual sale was a large one, but the aggregate of this business was of respectable proportions. There was some No. 4 foundry sold at \$11, and there was some No. 3 foundry sold at \$10.50. One order for 150 tons of No. 2 soft was sold at \$11.50. These varying prices will clearly indicate the irregularity of values. The desire of buyers whose deliveries are not matured to have them anticipated and shipped at once continues. One interest informed your correspondent that they had 15 such appli-

cations during the week, and the writer has in mind some that amount to 200 and 300 tons, and which do not mature until August and September. There have been very few cases of "hold-back" requests. The majority of the business concluded was for prompt delivery and for the third quarter. There were numbers of letters from buyers to the effect that if they failed to get prompt shipment they would run out of stock and would be compelled to shut down. These letters carry their own comment.

The market for scrap iron is about as last week, and we make no change in prices, which are quoted as follows:

Stove plate, \$9.
Heavy castings, \$10.50 to \$10.75.
Old steel rails, \$13.
Old iron rails, \$17 to \$18.
Open-hearth steel scrap, \$12.50.
Iron car axles, \$16.
Steel car axles, \$13.50 to \$14.
Old car wheels, \$15.
Relay rails, light, \$22 to \$24.
Relay rails, heavy, \$24 to \$25.
Railroad wrought, \$16.

It is now common gossip that we are to have somewhere in the district a new cast-iron pipe plant. But just where it will be located has not yet been determined. Among the leaders in the enterprise may be mentioned Miss Blair, who for a long period was secretary of the Dimmick Pipe Works, and Mr. Linthicum of the pipe works at Anniston. Circumstances conspire to make the announcement rather premature, as all their plans have not yet been matured. In this connection it is quietly whispered around that a very prominent interest has a similar proposition under consideration. But the statement is not authoritative.

Coal and coke, particularly the latter, are in active request. Some of the Virginia companies which have been supplying this district with a part of its coke have sold up to a point where the interests were notified that they could for the time being make no more contracts. This has occasioned a good deal of hustling on the part of buyers to remedy the hiatus. The price is still quoted at \$3.75 to \$4, the outside being for pulls that are favorite with buyers. Coal remains unchanged at \$1 to \$1.25 run of the mines. There are cases where up to \$1.35 is paid for the coal from certain seams, and in some cases it is as low as 85 cents.

The firm of Foust & Gilbert has entered business here, and will deal in pig-iron, steel, coke and coal, and in railway and contractors' supplies, locomotives, relay rails, etc.

An effort is being made on the part of Frederick H. Lewis, a consulting engineer of Staunton, Va., and Mr. J. R. Hannahan, the president of the Carolina Portland Cement Co., to establish a factory of large capacity here. They assert that in the year 1900 the Lehigh Valley district in Pennsylvania furnished 73 per cent. of the entire output of Portland cement of this country. To the present time it has dwindled to about 50 per cent. It is asserted that a large part of the cement purchased by the South last year and previously paid in transportation more than its purchase price. In the last five years three factories have been built in the South, but not one near to this city. The cement-making material, limestone, shale, coal, etc., are at our very doors and in abundant quantity and fine in quality, and our transportation facilities are beyond compare. If we have such advantages that outsiders are willing to put in their money with us, why not encourage them with the faith that consists of works?

Through the Commercial Club negotiations are being conducted for the establishment of a flint-glass bottle factory, a

stove foundry and a patent fireproof door and window factory, and it will not be long before the MANUFACTURERS' RECORD will be announcing the formation of a new furnace company to build several furnaces and erect a steel mill. This can be called a big enterprise, and it may be months and it may be years before it is entirely completed, but it is nevertheless a fact that will fully mature in the process of time.

J. M. K.

FOR A WATERWAYS CONVENTION.

Plans to Induce Liberal and Progressive Action by Congress for the Whole Country.

Misapprehension of the purpose of the waterways conference held at Cincinnati in June is likely to be removed by a consideration of facts about the action of that gathering, in which were represented such bodies as the Ohio Valley Improvement Association, the St. Francis River Improvement Association, the Pittsburg Coal Exchange, the St. Louis Merchants' Exchange, Pittsburg Merchants and Manufacturers' Association, the Louisville Commercial Club, the Pittsburg Chamber of Commerce and the Louisville Board of Trade. The resolutions of the gathering were as follows:

"This conference was called pursuant to a resolution adopted at a meeting held at the instance of and participated in by a majority of the members of the rivers and harbors committee of the United States House of Representatives, to devise and carry out a plan for holding a national waterways convention during the early part of the next session of Congress, for the purpose of inducing the government to adopt a more liberal policy for the improvement of the waterways of the country; therefore, be it

Resolved, That a national waterways convention, to which all trade, manufacturing, agricultural, laboring and river and harbor improvement associations, all governors of States and heads of municipalities shall be invited to send delegates, be held at the city of Washington during the early part of the next session of the Congress of the United States, for the purpose of arousing and expressing public sentiment in favor of a more liberal policy by our government for the rational improvement of the rivers and harbors of the whole country.

"That an executive committee of nine be appointed by the president of this conference to carry the foregoing resolution into effect.

"It having been brought to the notice of this conference that the National Rivers and Harbors Congress held at Baltimore, Md., October 8 and 9, 1901, has preserved its organization through an executive committee empowered to convene future meetings; and

"Whereas, the objects of said National Rivers and Harbors Congress and of the convention authorized to be called by this conference are identical; therefore, be it

Resolved, That the executive committee of this conference be and it is hereby directed before proceeding further to request the president and chairman of the executive committee of said National Rivers and Harbors Congress to call a convention substantially at the same time herein mentioned and at such place as may seem best, having the same general purpose herein indicated, and in the event of compliance with said request this conference pledges its earnest and hearty co-operation toward the success of such convention."

Mr. John L. Vance, president of the Ohio Valley Improvement Association, in calling the conference to order, said:

"In calling this conference to order a few words of introduction or explanation

are necessary. During the last session of Congress an invitation was extended by the Ohio Valley Improvement Association to the committee on rivers and harbors of the United States House of Representatives to make a trip covering the Ohio river from Pittsburg to Cairo. This invitation was accepted. Twelve of the seventeen members of the committee participated in the trip. It was believed that a personal examination of the river would have a strong bearing favorable to its improvement to the extent that a fixed stage of water be secured during the entire year for the transportation to market of the products of the valley, and the return to our markets of the products of other sections and countries.

"During the progress of the journey at various points addresses were made by the members of the committee on rivers and harbors. Without exception the importance of the river was recognized and the desire expressed for its improvement. Each utterance, however, was accompanied by the statement that the committee was hampered by want of money to do justice to the rivers and harbors of the nation, and desire was expressed that sentiment be aroused in favor of increased and regular appropriations by Congress for the improvement of the rivers and harbors of the entire country. With this sentiment aroused, it was the opinion of all who discussed the matter that appropriations could and would be largely increased and made with commendable regularity.

"As the trip progressed these expressions became stronger and more emphatic, and the question was broached of calling a national waterways convention, having for its sole purpose the devising and carrying out of plans for greater and regular appropriations for the improvement of the rivers and harbors of the country.

"At Cincinnati Hon. Joseph E. Ransdell of Louisiana, a member of the rivers and harbors committee, was chosen as spokesman to present the proposition. In a most convincing manner he gave reasons for a national waterways convention to be held at an early date, to be free from local issues and to advocate alone the improvement of the rivers and harbors of all the country, that thereby the Congress of the United States be influenced to advance the interests of the commerce of the country. During the progress of his address Mr. Ransdell suggested that the Ohio Valley Improvement Association take the initiative steps looking to the calling of such convention.

"He was followed by Hon. Albert Bettenger, one of the vice-presidents of the Ohio Valley Improvement Association, who, on behalf of the association, accepted and approved the suggestion, and promised that such steps would be taken as should be deemed advisable.

"The calling of a national convention for the purpose indicated was referred to frequently during the remainder of the trip after leaving Cincinnati. Before reaching Cairo a meeting was held on board the steamer Queen City, in which the members of the committee on rivers and harbors took a leading part. The result of the deliberations of this meeting was the adoption of the following resolution:

Resolved, That for the purpose of inducing the government to adopt a more liberal policy for the improvement of the waterways of the country, the Ohio Valley Improvement Association be requested to invite, within 30 days of the date hereof, representatives from every waterways improvement association in the country to a conference at Cincinnati for the purpose of devising and carrying out a plan for holding a national waterways convention during the early part of the next session of Congress."

"In execution of the request of the resolution a call was issued for this conference, copies of which were sent by Capt. J. F. Ellison, secretary of the Ohio Valley Improvement Association, to all important points throughout the country, embracing the Atlantic and Pacific coasts, the Lakes and Gulf ports and the inland waterways. He will read the responses received so far as have been made.

"These remarks are made and explanation given that you who compose this conference may understand distinctly that the Ohio Valley Improvement Association has been acting solely in conformity with the expressed wish of a majority of the members of the committee on rivers and harbors, and with no selfish or local purpose or project in view. The Ohio Valley Improvement Association believes that a waterways convention such as is contemplated can only be effective by throwing aside local considerations and advocating to the broadest and fullest extent the improvement of the rivers and harbors of the whole country. If such a convention be held, bringing together representative men from the ports of the oceans, lakes, Gulf and the inland waterways, all of them promotive of the commercial interests of the country, great and powerful good will be accomplished."

To Develop 50,000 Horse-Power.

The MANUFACTURERS' RECORD has referred recently to the plans of the Chattanooga & Tennessee River Power Co. for the development of the power available at "the suck" in the Tennessee river near Chattanooga, Tenn. In connection with this project the latest developments are of interest. John Bogart, 16 Exchange Place, New York, has been engaged as consulting engineer by the company, and he will proceed with planning the developments and power-house. About 50,000 horse-power will be developed, and practically the entire amount will be transmitted to Chattanooga over a pole line about 12 or 14 miles long. The water-wheels will be of the vertical type attached to vertical generators of the alternating-current type, three phase, 60 cycles. Each machine will be capable of 3000-kilowatt continuous load, and there will be 14 of these installed. The lock will be over 60 feet wide; the dam will be 40 feet high and 1200 feet long; the power-house will be built for the 14 generators mentioned. No time has been set for the letting of contracts, but it will be in the immediate future. Other details regarding the company were previously presented, including the statement that New York capitalists had agreed to finance the proposition. The company was organized through the efforts of Messrs. C. E. James and J. C. Guild of Chattanooga. Its capital stock is \$3,000,000.

Increasing Its Electric Plant.

The demand for electric power in Montgomery, Ala., during the past year has far exceeded the expectations of the Montgomery Light & Water-Power Co., and it finds it advisable to increase its plant's capacity. The company is at present supplying about 3000 horse-power, which amount it will increase to approximately 5000 horse-power by the installation of new machinery costing nearly \$30,000. Contracts have been awarded for three big water-wheels and a generator of 2000 horse-power, a switchboard and other equipment, all of which will arrive in October and be in position ready for operation by December. The Montgomery Company develops its power at Tallassee Falls, near Tallassee, Ala., and expects that the improvements contracted for will supply Montgomery's needs for several years before it will be necessary to again increase the plant.

Morgantown Tinplate Mill.

It is announced that the courts have confirmed the recent sale of the Morgantown Tinplate Co.'s plant at Morgantown, W. Va., to George C. Sturgiss. Mr. Sturgiss represented the American Sheet & Tinplate Co. of Pittsburg, and the property will be legally transferred to this company at once. It is the intention of the new owner to begin within 30 days the thorough overhauling of the plant and to make improvements, about \$400,000 to be expended. As soon as possible the mill will be put in operation, employing probably 1000 men.

Ripley Business Men's League.

[Special Cor. Manufacturers' Record.]

Ripley, Miss., July 10.

The business men of Ripley have organized a Business Men's League with Messrs. A. G. Barnett, president; T. J. Cole, Dr. C. M. Murry and Claude Hines, vice-presidents; A. C. Anderson, secretary; H. R. Spight, assistant secretary, and W. L. Matthews, treasurer. The league will endeavor to locate some business enterprises that will be helpful to the town.

A. C. ANDERSON, Secretary.

Coal-Mining Plant.

The West Virginia Coal Co., whose vice-president, Davis Elkins, is president of the M. & K. Railroad, which is preparing for the construction of a railroad from Kingwood to Rowlesburg, both in West Virginia, will erect a large coal-mining plant near Kingwood. The company will also build several hundred coke ovens and equip the plant with modern machinery.

The Carrollton (Ga.) Board of Trade has been organized with Messrs. L. C. Mandeville, president; M. M. Bradley, vice-president; L. D. McPherson, secretary; H. W. Adamson, assistant secretary; John R. Adamson, treasurer; J. C. Bass, L. K. Smith, J. W. Griffin, C. M. Tanner, C. B. Symington, J. L. Heaton and H. W. Long, board of directors.

In the second internal revenue district of Virginia, which includes the cities of Richmond and Petersburg, the revenue returns indicate that 17,000,000 pounds of plug, twist, cut-plug and granulated chewing or smoking tobacco were manufactured during the past fiscal year.

The official proceedings of the twelfth national irrigation congress, held at El Paso, Texas, last November, have been published in a volume of more than 430 pages, which will be found of value to students of irrigation and its allied subjects.

The Industrial Club of Raleigh, N. C., has been organized with Messrs. Alexander Webb, president; Alfred Williams and Elmer Scaffer, vice-presidents; T. S. Fuller, secretary, and Walters Durham, treasurer.

The Houston (Texas) Business League has now a committee charged with arranging for the organization of a corporation to promote and take stock in new manufacturing concerns.

The Wheeling (W. Va.) Board of Trade has issued a manual containing a list of its officers, members, committees and subscribers and a copy of its constitution and by-laws.

Twenty buildings are now in course of construction at Dallas, Texas, representing \$953,000. In addition, a number of dwellings are being built ranging in price from \$3000 to \$10,000.

The contract for deepening the channel over Mobile bar, giving a depth of 30 feet, has been awarded to the Southern Dredging Co. of Mobile.

FOREIGN LETTERS

The MANUFACTURERS' RECORD is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. Some of these letters indicate the disposition of foreigners to buy American goods, and are therefore of interest to our readers.

Opportunities in India.

Tuhin Chandra Mukerji of the Indian Industrial Emporium, Guptipara (Bengal), India:

Agricultural implements, machinery for shelling rice, hand looms for weaving cotton cloths, small spinning machines, soda-water and ice machines and printing presses are some of the American manufactures which are likely to find a market in India. At present I am endeavoring to introduce hand knitting machines of Branson Machine Co. of Philadelphia in India, and the first trial machine has already been shipped for us by Messrs. Wm. E. Peck & Co. of 116 Broad street, New York. If the machine proves superior to English-made machines of Harrison & Co. it will command a large sale in India. Already the mills of the Enterprise Manufacturing Co. of Philadelphia enjoy a decent sale here. American clocks and watches, especially those made by the Ansonia Clock Co. and by Seth Thomas, are extensively sold in our market, natives being mostly importers of these goods. Ferracute Manufacturing Co. of Bridgeton, N. J., has lately supplied a press and a number of dies for jewelry work for the firm of Bholanath Das of Simla. There is a good field for exportation of American bicycles, steel trunks, leather belting, printing paper, piece goods and knitting yarns to this country. With reference to information affecting our interest in American goods, I have thought fit to refer the matter to my elder brother, Babu Satis Chandra Mukerji, who is an Hon. Corr. Member of the Brooklyn Ethical Association, and was formerly a member of the Advisory Council of World's Columbian Exposition Auxiliary, from whom you will no doubt hear from time to time. If American manufacturers are desirous of advancing their trade I should strongly advocate establishment of a representative manufacturers' agency at Calcutta, as British manufacturers now afford every facility to Indian customers, though, of course, at a heavy price.

Goods for Russia.

Mr. L. Magnin, exporter and importer, the Comptoir Magnin, No. 5 Streimianina street, St. Petersburg, Russia:

In my efforts to advertise and market American goods in Russia I have established in St. Petersburg a permanent exposition for American products exclusively, all of whose exhibits will be actively advertised throughout Russia, principally in the railway cars, for which I have obtained a special concession. American products will be sold by samples shown at this exposition and the samples themselves also disposed of, with the understanding that they are to be replaced by fresh samples as occasion may require. In order to maintain the exhibition I solicit subscriptions for periods of three years from those who desire to avail themselves of the benefits of the enterprise, at the rate of \$600 per year, payable in instalments every four months in advance. The lowest number of subscribers needed to keep the movement going is 10. A study of my contract and correspondence with me personally are requested. I am convinced by actual experience that this is the only practical method of making sales of American products in Russia, and I hope for earnest co-operation and active support on the part of American manufacturers—every sub-

scribing manufacturer having thus the privilege of permanently showing his products under favorable conditions in Russia, no less than the opportunity of making quick sales on the spot.

Manufactures in Nicaragua.

Groninger & Co., manufacturers' agents, P. O. Box No. 9, Bluefields, Nicaragua:

We should be very glad if you would publish our firm in your paper calling the attention that we are open to take representations of manufacturers of any kind of articles made in the United States, and that we would gladly receive any offer for to see if can be done a business on the offered articles. In case you should be able to bring us in connection with capitalists who are willing to go into a business or to buy a concession to make coconut oil on the Atlantic coast of Nicaragua, we should be very glad to hear from you about this matter, and because this business will give sure more than 100 per cent. profit and require a capital of about \$20,000 gold for to buy the best machinery, building factory and to run the whole business. Please let us know what firms should have interest in the exportation of guano. At the same time please give us advice where and what firms should have use for a raw material like India rubber. We could supply of this stuff big quantities after knowing what price can be paid for this article, giving the right to take out this article from Nicaragua only to one firm.

Filters in Cuba.

P. D. de Pool, manufacturers' agent, San Ignacio 82, Havana, Cuba:

I am in receipt of your *Daily Bulletin*, in which I have seen the letter of the Georgia Brick Manufacturers' Association asking the Burt Manufacturing Co. for catalogue of their popular filters and at the same time putting in a word of commendation for your excellent paper. As for myself, I have the pleasure to say that my best connections made with American manufacturers have been by means of information gathered in your valuable publication. I am also pleased to note that the Burt Manufacturing Co., whom I have the pleasure of representing in Cuba and Spanish America, is getting a good share of business through the medium of their ad. in your paper. I am satisfied with the connection made with them by means of an ad. seen in your paper some time ago, as their filter proved to be the thing in Cuba, where I have already sold a large quantity with perfect success. Wishing you unremitting success in your propaganda in favor of the South.

A Graduating Machine.

Josef Schvarecz & Co., railroad, mill furnishers, industrial and agricultural machinery and implements, of Budapest, Hungary:

We need a machine for making graduations one millimeter wide and three millimeters deep in beam-scale arms from the shortest sizes up to 1500 millimeters length of arm. The arms have on each end peglike projections from about 50 M. M. to 126 M. M. in height. These machines must be entirely automatic and must operate with mathematical precision; they must have mechanism that can be moved from 5 to 25.5 M. M., so that in this way the graduations or cuts can be made at variable distances. These could be "Frais" machines; if, however, a saw would be more practical for the purpose mentioned in order to make the graduations automatically and mathematically true, then the saw could be adopted. We thank you to kindly let us have the address of original makers of the machine described.

MINING.

North Carolina Pysophillite.

Editor *Manufacturers' Record*:

In the days of the growth of the New South the hidden wealth that is in the soil and rocks of this most forward section of the North American continent startles the most sanguine optimist. New discoveries are daily being reported. The world now recognizes the importance and value of the clay deposits and the cement formations of the Carolinas, Georgia and Alabama, the phosphate beds and deposits of like nature, but there lies in Moore county, North Carolina, a vein of mineral, valuable in its nature, but hitherto practically unknown to the commercial world except to a select few, who, for reasons of their own, have seen fit to belittle the magnitude of the deposit in order to keep their profits entirely within their own small circle.

I allude to the big vein of pysophillite which runs through the northeastern section of the county. Pysophillite, falsely called soapstone, is a species of talc and answers the purpose of talc in nearly every branch of the commercial arts wherein talc is used. This mineral resembles talc in every respect except in its analysis. It is anhydrous silicate of aluminum, while talc is anhydrous silicate of magnesium.

Pysophillite is being mined in small quantities on two or three properties in Moore county. The vein is very wide, and the deposits along the strike of the vein are very large. The cost of mining and milling is very low. Railway transportation is close at hand and labor is cheap. There is no reason why the output of this mineral should not reach a large tonnage in the near future. Owing to the fact that this mineral is very soft in texture, being as soft as talc, the ore deposits do not show on the surface, but boundary walls are well defined for miles, and prospecting between these walls to a depth of three or four feet almost invariably brings results. Of course, in some places there is a preponderance of grit, but pure pysophillite can always be found.

Some of the ore is dazzling white, a brilliant lustre, some of yellowish tinge and some of it is blue, probably owing to the presence of iron. The blue varieties make the finest kind of facing for moldings and foundries, and is used by one or two firms for that purpose. As resister of heat in furnaces pysophillite has practically no equal. When mixed with a small percentage of fire-clay for a bond a brick can be produced which will resist more heat than any like substance known. There is also a body of excellent fire-clay contiguous to the pysophillite vein.

This district is worthy of investigation at the hands of manufacturers of paper, soap and other commodities wherein talc forms a component part. The owners of the lands through which the strike of the vein runs appear to be awakening to the fact that it is necessary for them to show up the deposits on their properties, and a good deal of prospecting is on the carpet for the near future. Several important developments will no doubt take place. The several sites for dams along the course of Deep river will furnish electrical power for future mills and works, but the cheapness of fuel in this neighborhood makes steam power about as cheap as any.

To those desirous of information furnished fully upon this subject, I will cheerfully furnish the information upon request.

In addition to the various uses to which this mineral can be applied in the commercial arts, there is another, namely, a medicinal one. For healing by outward application sores of any kind, from the running sores of old age down to fresh

cuts or abrasions, prickly heat and sunburn, powdered pysophillite has few if any equals. This is a broad statement, but it can be verified without cost by any person who cares to send for a sample, enclosing enough money to pay postage.

D. A. McDONALD,

Clerk of the Superior Court, Moore County.

Coal Lands Bought.

The Degnan & McConnell Coal Co., according to dispatches from Ardmore, I. T., has purchased at \$80,000 the property of the Mexican Gulf & Transportation Co. The transfer includes several large mines at Howe, I. T., and 50 coke ovens near there; also 200 coke ovens at Alderson, I. T. It is stated that the sale was made to satisfy a mortgage of \$200,000 on the property held by the Provident Trust Co. of Cincinnati, Ohio. The Degnan & McConnell Coal Co. was reported last week as incorporating, with a capital stock of \$200,000.

Coal-Land Development.

Representative James A. Hughes of Huntington, W. Va., has purchased a tract of 1700 acres of coal lands in Wyoming county, West Virginia, and will open mines on the property as soon as shipping facilities are at hand. The land lies on the proposed lines of both the Deepwater and C. & O. railways, the two roads having parallel surveys through that part of the county. The Deepwater is grading its roadbed within a few miles of the tract, and it is the evident intention of the C. & O. to enter the territory as soon as practicable.

Opening Coal Mines.

The Indian Coal & Mining Co., with offices at South McAlester, I. T., is preparing to develop coal mines at Pochontas, I. T., investing \$50,000 in the enterprise. The capacity of the mines when development work shall have been completed will be about 500 tons per day. The product is bituminous coal of a fine quality. Officers of the company are H. A. Miller, president; C. R. Craig, vice-president; J. A. Nichols, treasurer and general manager; M. J. Smith, engineer in charge of operations.

Notes.

The total production of all coal workings in Kentucky last year amounted to 7,559,940 short tons.

The prison commission of Tennessee will extend the time for receiving proposals for coal lands until August 1.

At Reeders, south of Birmingham, Ala., the production of ore mines of the Tennessee Coal, Iron & Railroad Co. amounted to 3850 tons of ore in one day of 10 hours.

About 4,000,000 bushels of coal were shipped south from Pittsburg on the last rise of the river, with a probability that 1,000,000 bushels more can be gotten off on the water that is now prevalent. It is believed that the July shipments this year will be less than those of last year.

United States Senator Stephen B. Elkins of Elkins, W. Va., has obtained from the Merchants' Coal Co. of Baltimore, Md., an option on 9000 acres of coal lands in Preston county, West Virginia. It is understood that the option will expire in 30 days, and during this time the property will be thoroughly examined as to its possible value.

The output of coal from New River district in West Virginia for June aggregated 416,440 tons, a decrease of 43,000 tons compared with the May output, which was below the average. The coke loaded amounted to 702 cars, 100 cars less than the number loaded during the month of May. Indications are that the output of coal and coke will be increased during July.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

RAILWAY AND MINES.

A Great Enterprise Financed by New Yorkers in New Mexico.

An important railway and mining enterprise in New Mexico will be financed by Fisk & Robinson and a syndicate, in pursuance of contracts closed for the purchase of \$7,000,000 of first mortgage 50-year 5 per cent. gold bonds issued by the St. Louis, Rocky Mountain & Pacific Company. This corporation was chartered a few weeks ago in New Mexico as successor to the Raton Coal & Coke Co., and its plans are extensive. They include the building of 120 miles of railroad and the production of from 1,000,000 to 1,200,000 tons of coal and 125,000 to 150,000 tons of coke annually.

The railroad line will extend east to west in Northern New Mexico, south of the Raton mountains, starting from Des Moines, on the Colorado & Southern line, 80 miles southeast of Trinidad, Col. Running thence westward the road will intersect the Atchison, Topeka & Santa Fe near Raton and the Dawson branch of the El Paso-Rock Island system south of Dawson. Beyond Cimarron the route will lie up the Cimarron canon to the Baldy and Elizabethtown mining districts in the Moreno valley, at the foot of Baldy mountain. The road will have also branch lines to the Blossburg and Van Houten mines. The financial plans are sufficiently comprehensive to permit of extensions of the line to additional mining districts if found advisable, and also westward over Taos Pass and through the Taos and Rio Grande valleys to Farmington, N. M., in the San Juan valley.

As a basis for the enterprise the company has acquired all of the property of the Raton Coal & Coke Co., situated in Colfax county, New Mexico, in the foothills of the eastern slope of the Rocky mountains, just south of the southern boundary line of Colorado. This field is a continuation of the well-known Trinidad coal field. The St. Louis, Rocky Mountain & Pacific Company's property consists of 189,480 acres of coal land in fee-simple, and coal rights and surface necessary for mining in 314,300 acres. The area controlled, about 800 square miles, is one-half as large again as all of the anthracite coal regions of Pennsylvania and five times as large as the entire Connellsville basin. This property is the largest body of coal land under one ownership in the United States. The coal lies in horizontal veins, mostly from 5 to 13 feet thick, and is mined by tunnels or drifts and entries along the veins into the mesas or foothills.

Within about 28,000 acres, or 44 square miles of the land owned in fee, which is adjacent to the mines now in operation, the quantity of available coal in one vein only actually developed and proven by tunnels and diamond-drill borings is estimated by mining engineers at 300,000,000 tons, exclusive of 50,000,000 tons of valuable coal for domestic use in higher seams now being opened. The territory controlled is underlain by about 2,250,000,000 tons of workable coal, all told.

The Elizabethtown and Baldy mining districts are located near the western terminus of the line. Gold was discovered in the Moreno valley in 1806, and placer mining has been carried on actively there and at Ute Creek ever since. Quartz mining also is carried on to some extent in these districts, chiefly for the production of gold, though ores of silver, copper, lead and iron are found there. About 2000 mining claims have been patented to date

in the districts around Baldy mountain. From 30 to 40 concerns already organized have encouraging prospects, and 12 or 15 strong companies are ready to begin actual work as soon as the new railroad supplies transportation.

Various Eastern and Western financial interests are associated with Fisk & Robinson in the undertaking. The president of the company is Henry Koehler, Jr., vice-president of the Commonwealth Trust Co. of St. Louis, Mo., and the General Manager is J. Van Houten of Raton, N. M.

TENNESSEE CENTRAL.

Extensive Improvements and Extensions—Coal Lands to Be Developed.

For some time reports have been in circulation that the Tennessee Central Railroad would make extensive improvements, and now, according to a dispatch from Nashville, President J. C. Van Blarcom and Senator Joseph W. Bailey of Texas, the latter special counsel for the owners, have confirmed these reports, saying that important extensions will be made and that when the work is done the company's mileage will be almost doubled. It is said that about \$1,000,000 will be spent in Nashville.

Senator Bailey is further reported as saying: "The company will liquidate all its indebtedness, almost rebuild the present lines and make a number of important extensions. I have gone over the coal fields along the eastern division. The company will also begin at once to develop a great deal of the coal property. It will be necessary to extend the railroad into the coal fields and to build several short lines, and this will probably be done at once."

Concerning the report that the Tennessee Central would be absorbed by the Frisco system, Senator Bailey is quoted as having said that matter was for the stockholders to decide. He also said that very close traffic arrangements had been made with other railroads.

Besides President Van Blarcom, the other St. Louis men interested in the Tennessee Central include H. Clay Pierce of the Waters-Pierce Oil Co., D. R. Francis and Adolphus Busch.

Frisco Equipment.

President A. J. Davidson of the Frisco system is reported as saying that within the last two weeks he has let contracts amounting to \$3,500,000 for new equipment. To the American Car & Foundry Co. a contract was given for 500 gondola coal cars of 50 tons capacity each, 400 Otis self-clearing 50-ton coal cars, 500 twin-hopper self-clearing 50-ton coal cars, all these for the Frisco system proper. But the same company will also build for the Chicago & Eastern Illinois division 1400 Otis gondola self-clearing coal cars of 40 tons capacity each, 750 box cars of 40 tons capacity with steel underframes, 250 box cars of the Otis self-clearing pattern, 40 tons capacity, and 100 gondola self-clearing coal cars of 50 tons capacity.

To the Pressed Steel Car Co. was given an order for 100 self-clearing coal cars of 50 tons capacity for the Frisco. Delivery on these orders is to begin in September and to be finished in October.

It is stated that during the last year the Frisco has ordered nearly \$8,000,000 of equipment, including 52 locomotives and 4500 cars, in addition to these new contracts.

Columbia to Clark.

The proposed Columbia, Chicago & Northwestern Railroad, according to a letter received by the MANUFACTURERS' RECORD, will be 33 miles long from Columbia, Mo., to Clark, Mo., connecting at the latter point with the Wabash Railroad and

the Chicago & Alton Railway. The line will run through 20 miles of coal territory, and will not parallel any other road. The citizens at Clark have signed a contract for terminals and eight miles of right of way. The council at Columbia has granted franchise for entrance and terminals, and the county court has also given privilege of county roads, etc. It is expected that the railroad will be completed not later than June, 1906. At present 21 miles of right of way have been secured. The money is on hand to build.

Columbia has 8000 population, and is growing. Clark has 600, but is located in "the finest part of Randolph county," and the stock and agricultural interests are excellent. It is estimated that the freight on the new road will pay all interest on bonds.

Virginia & Carolina Coast.

The Virginia & Carolina Coast Railroad Co., which proposes to build a line, as heretofore described, from Norfolk, Va., to Beaufort, N. C., with a total length of about 200 miles, has been granted a charter.

The company will develop the timber lands of the John L. Roper Lumber Co. in Virginia and North Carolina, and also the Alexander Sprunt timber lands in Hyde and other counties in North Carolina. The directors are R. T. Goodell of New York, president; Sidney Teiser, first vice-president; T. C. Jones, second vice-president; W. W. Dey, Jr., secretary and treasurer, and T. D. Savage, general manager, all of Norfolk, Va.; Alan G. Burrow, John Upton, O. L. Shackelford, J. H. Day, Jr., Thomas W. Shelton and Lindsay Heard, also of Norfolk.

It is said that when the lumber companies have been absorbed by the new railroad company the present directors of the railroad will resign and a number of New Yorkers will succeed them.

Southern's Block Signals.

The Southern Railway Co. announces the installation of the most modern improved block signals on its line, and says that there are 158 block stations between Washington and Atlanta, averaging 4.1 miles apart. The block signals are also being placed on other parts of the system as rapidly as possible, and in the yards at passing tracks and at grade crossings the most improved interlocking switch and signal apparatus has been installed, greatly facilitating the handling of trains. The announcement of these improvements is made in a tasteful circular with illustrations, one of which represents an express train at full speed on the Southern's line.

The company has also issued a handsome pamphlet illustrating the interior and exterior of its new terminal station in Atlanta, Ga. S. H. Hardwick is passenger traffic manager, and W. H. Tayloe, general passenger agent at Washington, D. C.

MEMPHIS TO THE GULF.

Goulds Buy a Line From Alexandria to Lake Charles.

The St. Louis, Watkins & Gulf Railway, according to a report from Lake Charles, La., has been purchased by the Gould railway interests. President J. B. Watkins is quoted as saying that the price paid was \$1,500,000.

The St. Louis, Watkins & Gulf extends from Alexandria, La., southwest to Lake Charles, La., about 100 miles. It connects at Alexandria with the Gould system. There has been some talk of extending the line to Beaumont and from there westward to connect with the Gould lines in Texas. Nothing definite, however, seems to be decided, although it is anti-

pated at Lake Charles that the extension to Beaumont will be built.

The purchase of this road almost gives the Gould system another route from Memphis to the Gulf of Mexico.

Kingwood to Rowlesburg.

Mr. F. K. Bretz, general manager of the Morgantown & Kingwood Railroad, writes from Morgantown, W. Va., to the MANUFACTURERS' RECORD:

"We have asked for bids on an extension of our line from Kingwood to Rowlesburg, a distance of about 18 miles. Bids will be opened some time during the present month. We have been in communication with all the contractors we care to have go over the work.

"This extension will connect with the main line of the Baltimore & Ohio Railroad at Rowlesburg, W. Va., and will give us a through line from Morgantown, on another part of the system, to Rowlesburg, a distance of about 48 miles.

"The construction work is in charge of Julius K. Monroe, chief engineer, Kingwood, W. Va., but all the purchasing is done by me."

A Lake Outlet for Coal.

The Lorain & Ashland Railroad, according to a report from Pittsburg, has been chartered in Ohio, Joseph Ramsey, Jr., and others being the projectors. It is said that this railroad is for developing their West Virginia coal lands by giving a lake outlet for the product. Lorain is on the southern shore of Lake Erie, about 25 miles west of Cleveland, and the distance from there to Ashland, Ohio, is 40 miles south. The projected line could connect with the Wheeling & Lake Erie, or it might be extended to reach the Zanesville & Marietta Railroad, which the Ramsey interests were building to connect with the Little Kanawha Railroad in West Virginia. The incorporators of the new road are James W. Patterson and W. E. Griffiths of Pittsburg, N. W. Ramsey of Dayton, Ohio, and R. J. Odell.

A MISSISSIPPI TUNNEL.

New Plan to Handle Traffic Between St. Louis and East St. Louis.

George K. Thomas, one of the incorporators of the Illinois & Missouri Tunnel Co., the incorporation of which is reported in St. Louis dispatches, is quoted as saying that it is proposed to build a tubular steel tunnel under the Mississippi river to connect St. Louis and East St. Louis for the handling of traffic. The tunnel will be about 50 feet below the river bed and about a mile long. Work will probably begin within a year.

Mr. Thomas is county clerk of St. Clair county, Illinois, and the other incorporators are Edward L. Thomas and John T. Taylor. The capital stock will be \$100,000.

Pensacola & Northeastern.

The incorporation of the Pensacola & Northeastern Railroad Co. at Pensacola, Fla., is reported, its purpose being to build a line from Pensacola, Fla., to Andalusia, Ala., about 75 miles. The line is said to be independent, having no connection with either the Central of Georgia Railway or the Louisville & Nashville Railroad. Mr. F. C. Brent, one of the incorporators, is, however, secretary and treasurer of the Yellow River Railroad, which is controlled by the Louisville & Nashville. The other incorporators are C. W. Lamar, C. M. Covington, John S. Avery and S. B. Milligan, business men of Pensacola, most of them engaged in lumber or turpentine business.

Tidewater & Western.

Mr. T. M. R. Talcott, general manager of the Tidewater & Western Railroad Co.,

lately incorporated, writes from Richmond, Va., to the MANUFACTURERS' RECORD that the Farmville & Powhatan Railroad, when sold at auction on June 7, was purchased by the bondholders, and that the Tidewater & Western Railroad Co. has been organized to operate it. At present nothing is contemplated except to make needed improvements and to provide some additional equipment for the property.

The Farmville & Powhatan Railroad was transferred to the bondholders on June 30, and since then has been operated under the charter of the new company.

Jacksonville to Fernandina.

The Jacksonville, Fernandina & Southern Railway Co. announces that it will apply for incorporation to build a line 28 miles long from Jacksonville to Fernandina, Fla. The stockholders and directors are Samuel A. Swann and William A. Evans of Fernandina, John R. Young of Savannah, Ga.; William S. West and John W. West of Valdosta, Ga.; Frank Adams of Jasper, Fla., and Charles Darby and Eugene E. West of Jacksonville, Fla. They are interested in the naval stores and lumber business. The officers are: President, Eugene E. West; vice-president, John R. Young; secretary, Samuel A. Swann; treasurer, Frank Adams.

Santa Fe Summer Tours.

The Santa Fe route has announced summer excursion rates to various points on its system and summer tours to Colorado and California. The service provided by the company is rapid, only one night being spent on the road between Chicago and Denver. The service to California is equally satisfactory, all possible comfort being afforded by sleeping and observation cars, with dining cars and dining rooms as required. Geo. T. Nicholson, passenger traffic manager of the Santa Fe system at Chicago, can give full information as to all these tours.

The New Orleans Belt.

The beginning of work on the New Orleans Belt Railway promises an early completion of the city's plan for a public belt line. Portions of the belt road have already been constructed by the Illinois Central Railroad, the St. Louis & San Francisco Railroad and the Louisiana Railway & Navigation Co. in return for franchise privileges. The work by the city is to complete several links along the river-front, and it is being done under the supervision of the Belt Railroad Commission, of which James W. Porch is chairman.

Kentucky Valley Railway.

Mr. Edwin C. Ruff, secretary, writes from Wheatcroft, Ky., to the MANUFACTURERS' RECORD that on account of there already being a Kentucky Midland Railway incorporated in the State of Kentucky, Mr. Irving H. Wheatcroft was compelled to have the name of his new line of railroad changed from the Kentucky Midland Railway to the Kentucky Valley Railway, and all the business will now be conducted in the name of the Kentucky Valley Railway Co.

Electric Belt-Line Plan.

Mr. John L. Ray writes from Albertville, Ala., to the MANUFACTURERS' RECORD that the right of way is being secured through the counties of Marshall, De Kalb and Blount for a belt line electric railroad to be built 30 miles long, the power to be furnished from the waterfalls on Town creek in De Kalb and Shore creek in Marshall. All parties interested should address J. F. Hooper, manager, and G. M. Rains, assistant manager, both of Albertville, Ala.

New Orleans Street Railways.

The property of the New Orleans Railways Co. has been purchased at auction for \$3,500,000 by M. C. Buckner of the reorganization committee, representing the New York Security & Trust Co. This was done preparatory to the organization of the New Orleans Railway & Lighting Co., which will take over the property and operate it. The new company will have \$20,000,000 of common stock, \$10,000,000 of preferred stock and \$30,000,000 of bonds.

Spartanburg to Rutherfordton.

Mr. A. B. Calvert writes from Spartanburg, S. C., to the MANUFACTURERS' RECORD that the Southern Railway having announced its intention to build a line from Johnson City, the project of building a road from Spartanburg to Rutherfordton, N. C., a distance of 30 miles, has been revived. The company has a charter and organization. Owing to the uncertainty of the construction of the line west of Marion, nothing has been done.

Memphis Terminal Plan.

Concerning the proposed organization of a terminal company at Memphis, Tenn., Mr. A. W. Sullivan, general manager of the Missouri Pacific Railway, writes from St. Louis, Mo., to the MANUFACTURERS' RECORD that the matter has not as yet assumed any definite shape, and it is not probable that anything definite will be done within the next three months.

Railroad Notes.

A press report that the St. Louis, El Reno & Western Railway was merged with the Rock Island system is officially denied.

The improvements and extensions proposed by the Memphis Street Railway Co., according to a report from that city, will cost nearly \$3,000,000. A new style of rail is to be used on the road, and deliveries have begun on an order for 85 cars.

The Baltimore & Ohio Railroad has, according to a report from Wheeling, W. Va., purchased the Fisher foundry property for the site of its new station. This tract is between Market and Chapline streets, north of 17th street for half a block and also south of 17th street, covering all except one lot in the block between 17th and 18th streets.

The New Sun Building.

The A. S. Abell Company, proprietors of the Baltimore Sun, have awarded contracts to Edward Brady & Son for the construction of the new Sun Building at the southwest corner of Baltimore and Charles streets. The building, which was designed by the well-known architect firm of Baldwin & Pennington of Baltimore, is to be three stories high with a basement and attic, and will have a frontage on Baltimore street of 52 feet and 9 inches and a depth on Charles street of 202 feet. The exterior will be of Indiana limestone with a base of Maryland granite, and will have 24 massive limestone columns 32 feet high extending from the second floor to the top of the third story. The counting-room, which will face on Baltimore street, will be elaborately finished in polished marble with ornamental plaster ceiling, and in the center will be a marble counter and public space with a broad marble stairway leading to the executive offices on the second floor.

The building will be absolutely fireproof and will have a steel frame with terra-cotta floor arches. Every modern mechanical device for facilitating the production of an up-to-date newspaper will be installed. The contract price for the construction of the building, exclusive of the mechanical equipment, was \$289,206.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

Consolidated Cotton Duck Co.

The Consolidated Cotton Duck Co. of Baltimore has organized with the following directors: Messrs. S. Davies Warfield, Charles K. Oliver, D. H. Carroll, E. Clay Timanus, George K. McGaw, William H. Grafflin, F. S. Landstreet, G. Clem Goodrich, J. H. Wheelwright, Richard Cromwell, Trenor L. Park, E. A. Brinkerhoff, Thomas M. Turner, William H. Wellington and Ralph C. Lupton. Officers were elected as follows: S. Davies Warfield, chairman of the board; C. K. Oliver, president; D. H. Carroll, vice-president and treasurer; H. L. Smith, assistant treasurer; C. S. Green, assistant secretary. This company is to be a merger of the Mt. Vernon-Woodberry Cotton Duck Co. and the United States Cotton Duck Corporation, the capitalization (in stock, bonds, etc.) to be \$20,425,000. It was referred to last week in connection with plans for expending \$1,000,000 to modernize the mills in and near Baltimore.

The Topsy Hosiery Mills.

The Topsy Hosiery Mills of Tupelo, Miss., has completed all the arrangements for its removal to Columbus, Ga. Contract has been awarded to the J. F. Gallivan Building & Construction Co. of Greenville, S. C., for the erection of the necessary buildings, these structures to include main mill two stories high, 50x160 feet; dyehouse one story, 50x75 feet; warehouse 25x100 feet, one story, all standard mill construction. Electric power will be used to drive the machinery. The equipment will include 85 knitting machines, 40 ribbers, 25 loopers, etc., employing 175 persons in the manufacture of hosiery, dyed black and tan, for sale in the stores of the Ely & Walker Dry Goods Co. of St. Louis, Mo., which owns the Topsy Hosiery Mills. Later on the equipment is to be increased to 150 knitting machines. J. E. Sirrine of Greenville, S. C., is the architect-engineer in charge. By October 1 the mill will be in operation.

For Textile Training.

With \$5000 appropriated for the textile department of the North Carolina College of Agriculture and Mechanic Arts, the equipment is to be considerably enlarged. The machinery to be added will include a set of combers for preparing cotton to be made into fine yarns, spinning frames, six additional looms for the work, a dozen hand looms for use in teaching designing and weaving in the early stages, machinery for dyeing and drying warps, sizing, etc.; various finishing machinery and mule spinning machinery, the latter being English, as it is no longer made in this country. Last term there were 41 students in this department, and the attendance and interest were fairly satisfactory, the equipment being then incomplete. Next term 100 students can be provided for.

Textile Notes.

The ginners of Texas will meet at College Station July 25.

The Abbeville (S. C.) Cotton Mills has declared a dividend of 3 per cent.

The Palmetto Cotton Mills of Columbia, S. C., expects to install a cloth press and a lathe.

The Eagle & Phenix Mills, Columbus, Ga., has declared a semiannual dividend of 3 per cent.

The American Cotton Manufacturers' Association will hold its next annual meeting in May, 1906, at Asheville, N. C.

The Yazoo Yarn Mills, reported last week as incorporated with capital stock of \$80,000, is for the purpose of buying the Yazoo Cotton Mills at Yazoo City, Miss. The company will effect permanent organization about July 15.

The American Net & Twine Co., H. F. Williamson, agent, Anniston, Ala., states that there is no truth in the recent reports that the company will build an addition to its plant. This company manufactures nets, seines, lines and twines, having mills at Anniston and at East Cambridge, Mass.

The plant formerly operated at Greensboro, N. C., by the Van Deventer Carpet Co. has recently passed to the ownership of the Marshall Mills. This company was referred to last week. It is manufacturing stair and art squares, and is composed of the following: Watson Whittlesey, president, East Orange, N. J.; Foster M. Voorhees, secretary, Elizabeth, N. J., and Franklin P. Marshall, treasurer, Greensboro, N. C.

Reference was made recently to the purchase of the Eastman Cotton Mills, Eastman, Ga., by W. H. Cotter and associates, and to their intention of providing improvements to the plant. The company has awarded contract for new machinery to the Lowell Machine Shops of Lowell, Mass., and to the Draper Company of Hopedale, Mass. This equipment is beginning to arrive, and will be in position by the end of August.

The Highland Park Manufacturing Co., Charlotte, N. C., is completing the installation of electric power, superseding steam in its plant. The wiring has been finished, the transformers are in position, and the six motors are ready for installing. There will be two 75-horse-power motors in the carding and spinning room, also a 30 and a 40-horse-power motor, and in the weaving room there will be a 150-horse-power motor and a 75-horse-power motor.

Plans are progressing for the establishment of the knitting mill referred to last week as proposed at Rockwood, Tenn. The company will have a capital stock of \$40,000, which is said to have been subscribed, and an application for incorporation will be filed. W. E. McElwee of Rockwood, Tenn., is one of the promoters of the enterprise, and associated with him will be Garnett Andrews, Jr., manager of the Richmond Hosiery Mills, Chattanooga, Tenn.

R. H. Wright of the Russell Woolen Mill Co., Morristown, Tenn., will take charge of the Cumberland Gap Woolen Mills at Cumberland Gap, Tenn., and add six knitting machines. The mill will then operate an equipment of 480 spindles, 24 looms, two sets of 40-inch cards, besides the knitting machinery. Yarns, jeans, cassimere, flannel blankets and woolen and cotton hosiery will be manufactured. Mr. Wright will locate in Cumberland Gap by September 1.

The consolidation of the Citizens' and First National banks of Waxahatchie, Texas, is reported completed. The new institution will have a capital and surplus of \$250,000, and the officers are O. E. Dunlap, president; W. H. Getzenaner, Capt. M. T. Patrick, Joe W. Singleton, S. M. Dunlap, vice-presidents; Ralph Getzenaner, cashier; James N. Langford, F. M. Getzenaner, W. E. Hipp, assistants.

MECHANICAL

Manufacture of Fertilizer Machinery.

[Special Cor. Manufacturers' Record.]
Wilmington, Del., July 11.

Stopping off here between trains I had a brief interview with the senior member of the firm of Walker & Elliott, pioneers and leading builders of machinery for the manufacture of fertilizers. Until my talk with Mr. Walker I had hardly realized how extensive the manufacture of fertilizers has become in this country, nor how important an industry the making of machinery for these plants now is. Here is a large establishment devoted exclusively to the manufacture of the various kinds of machines used in the production of the several varieties of commercial fertilizers, and while the Walker & Elliott Company is one of the oldest and best known of any house of the kind, yet so greatly has the business grown that a number of other houses of similar nature have come into existence in recent years.

"When we began business 25 years ago," said Mr. Walker, "the slaughter-houses gave away the blood, bone and offal. Now, through the extension of the business of fertilizer factories, nothing is thrown away, even the water being utilized. It is only since 1884 that cottonseed has been treated, in any degree of perfection, mechanically and scientifically. The first crude machine for crushing the seed and destroying the germ so the seed might rot in the ground instead of sprouting was exhibited at the New Orleans Exposition. Then came a machine for the separation of the meat from the hull, and finally the big step forward, when the invention was made for taking the lint from the seed. This makes it possible to utilize every portion of the seed in the most advantageous and profitable manner.

"Phosphate rock is today the basis of all commercial fertilizers. After being converted into acid phosphate by sulphuric acid it is mixed with various ingredients. In the South cottonseed hulls and meal are extensively used. The meal is used for ammoniates after the oil has been taken out, and for this reason cottonseed-oil mills are quite generally putting in fertilizer factories to fertilize their waste products. Therefore, while we are selling machinery all over the country, and have made several shipments to the Hawaiian Islands, South America, Canada, Ireland, Italy and other countries, our principal sales are in the South. The founder of our business was doubtless the pioneer in this line in the country, but he sold only on this peninsula. The development of the business of fertilizer manufacturing and our attempts to keep abreast with new processes, discoveries and inventions have resulted in building up the business we enjoy all over the country today."

How thoroughly Messrs. Walker & Elliott cover the field is indicated in the list of machinery they manufacture. There are crusher, and grinding machines adapted to the reduction of phosphate rock and other substances from large lumps to particles the size of a hickorynut or as fine as wheat, or even to a powder. There are disintegrating mills for grinding bone, blood, soda, salt cake, phosphate rock, soft Florida rock, plaster rock, tankage, oyster shells, dried fish, etc. There are pulverizers of varied design to take care of tailings, for pulverizing and preparing acid phosphate and other fertilizers for bagging. There are many kinds of mixing machines, screens, etc.; everything, in fact, required in the operation of any kind of a fertilizer factory. And every machine is of the best workmanship and according to the most up-to-date design.

Further investigation into the growth of the fertilizer industry shows some re-

markable features, hardly realized generally, in connection with the changed conditions that have been brought about in agricultural operations by this new enterprise. Hardly any feature of modern farming, fruit or truck growing has undergone a greater change than that wrought by the introduction of commercial fertilizers, and so new an industry is this that of the 422 fertilizer factories in the United States reported by the census of 1900, only seven were in operation prior to 1860. Indeed, the industry as it exists today has almost entirely grown up within the past 20 years, or since extensive phosphate-rock discoveries in this country and the perfection of methods for treating the seed of cotton and the handling of packing-house waste. True, the first fertilization with materials other than barnyard manure dates back to the time of the earliest New England settlements, when, according to the records of the Plymouth Colony, Squantum, a friendly Indian, showed the colonists how to fertilize their corn by putting a fish in each hill. Subsequently a large industry was built up in the use of menhaden, or mossbunkers, a plentiful fish in New England waters, and useful only as food for bluefish and as fertilizers for land. By extracting oil from these fish an article of commercial value was obtained, while at the same time the refuse was rendered more available and valuable as a fertilizer than the fish with the oil unextracted. This industry was built up to large proportions and flourished for a number of years, but, other fertilizers coming it, it gradually declined, till today it is of very minor importance.

A half a century or more ago there was a regular boom in Mexican and Peruvian guano, obtained from the nesting and roosting places of myriads of sea fowl and consisting not only of the accumulations through ages of the droppings of the birds, but of their carcasses as well. It is said that as long ago as 1830 importations of guano were made, and then and for many years afterwards Baltimore was the headquarters of that commerce in this country, indeed, it was almost imperative that the Baltimore brand be on a guano pack to secure a ready sale at the top price.

In addition to 422 factories in the United States reporting in 1900 as engaged in the manufacture of commercial fertilizers ready for use, there were 56 others devoted to the production of articles entering into the manufacture. The total value of the products of these 478 establishments was \$42,097,673 for the year reported. In the North Atlantic division of States there were 155 factories, with an output valued at \$11,978,666. The South Atlantic division had by far the largest number of establishments of any of the divisions, the total being 198 and the value of the product being \$19,462,816, or more than 45 per cent. of the value of the whole country's production. By States the number of the factories in this division was: Delaware, 11; Maryland, 42; District of Columbia, 7; Virginia, 42; North Carolina, 20; South Carolina, 24; Georgia, 45; Florida, 7. The North-Central States, Ohio, Indiana, Illinois, Missouri and Kansas, had but 63 factories, producing \$4,349,157 in value, while in the South-Central division, represented in the reports by the States of Kentucky, Tennessee, Alabama, Mississippi and Louisiana, there were 39 establishments with a total product of \$5,053,564 value.

One Reason for "Poor Hollow Concrete Building Blocks."

Editor Manufacturers' Record:

The philosophy of making good artificial stone by hand and even better than can be done by hydraulic pressure is very

simple, but from such information as can be gleaned from the advertisements of hollow-block machines is little understood, and to this may be attributed much of the trouble in question about damp houses when plastered directly upon the walls.

This is only one of many faults which are coming to light as the novice gets in his work, but in justice to the industry it is perhaps best to inform the public that if it employs incompetent workmen who use still more incompetent machines they must always expect trouble from one source or another, and it must also be understood that experts, as a rule, are not anxious to divulge all the points which they have learned by long experience, and when some "three or four-year-old" begins to elaborate on what he knows about artificial stone or building with hollow blocks it is well to shun him as well as his theories.

But the fact is recognized that tamped stone is the best if it has been properly done, and obviates many serious difficulties otherwise unavoidable; but all tamped stones are not alike, and some are worthless, so that proper rules must be observed at all stages of the process. One in particular is very essential, and this one I will explain.

To begin with, the mixture must be exactly right in all details, which cannot be taken up in this article, but special attention is called to its consistency at the time it is put into the mold. As in illustration, take the painter applying gold leaf. He does not work haphazard by putting on the varnish and then the leaf. See how he carefully watches for the right consistency of the varnish as it dries, so as to properly hold the gilding. Just so with the best operators in artificial stone. The mixture must be right, and in addition the mechanical means must be correct. The desideratum in this respect is the ability to compact the mass into the smallest space possible and hold it there. The ramming of the mixture in an open box or mold cannot give that density which is necessary for waterproof work. This can be illustrated by the manner in which sidewalks are tamped, and the only way to make waterproof work in such cases is to add enough cement, which is prohibitive by the additional cost.

Everyone knows the power contained in the well-known principle of the wedge, and the best results in compacting the artificial-stone mass is on this same principle, and to accomplish this the mold must be the smallest in the bottom, the walls somewhat inclined and not too far apart.

Taking for granted that the mixture is in just the right stage to retain its position under the repeated blows of the rammer, it is shoveled into the mold and pounded down between its inclined walls, which grasp the material like a vise, each blow adding to that already given and retained, in connection with the sticky condition of the right mixture, compacts the mass to the smallest degree, and the density, strength, porosity and lasting qualities of the stone thus produced are greatly enhanced, as well as a more even and uniform color, with less liability to efflorescence and cracking.

A stone made in a mold whose walls are 12 inches apart cannot be compacted to that degree of the one with walls only three inches apart and properly inclined. It was this favorable feature which aided very materially in making hollow blocks a success, because when the cores were in position the thickness of the walls of the stone would be the most advantageous in ramming. This, in addition to the tapering cores, produced the wedge-shaped mold and the ideal conditions for perfect stone. It is this principle why better impressions are given to the stone by the sides of the mold than can be obtained from the bot-

tom. With these features all properly combined there is no reason in the world for this great commotion in all the papers about damp buildings, efflorescence and the thousand and one troubles which people are clamoring about without the knowledge or adaptability of the business.

Of course, with the best machinery many will make failures at first and with the poorest machines some will get comparatively good results; but it is greatly to be desired, as far as the industry goes, that nothing but the best should be put out and the proper instructions given for the purpose of education. There is no reason for poor stone and poor buildings, and in time this kind of work will not be tolerated by the public any more than it is at the present time by those who know what good work should be.

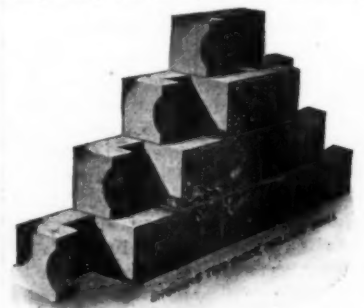
Now look at the shape of a good many of the machines advertised for making building blocks and sometimes exploited by reading notices. Some of them are actually the largest in the bottom of the mold, especially those whose cores are drawn from the top, destroying entirely all possibility of obtaining the benefits which would result with the core reversed. In many others the walls are the same distance apart at top and bottom, and in the so-called "face-down" machines there is no core at all when the tamping begins, and even this improper tamping is again disturbed by shoving the cores into the mold at the side after the same has been partly filled, ignoring altogether one of the most important principles of correct stonemaking, to the detriment of good work and the proper advancement of the industry.

Of course, they get stone; they put up buildings, and in some cases are acceptable; but how many are not acceptable? Is it any wonder that we are beset with importunities and vexing questions, and that our rivals in other material are laughing at the mistakes of incompetents, who, failing to draw a distinction between those who do and those who do not know their business, are retarding the growth of an industry that is in time to supersede to a very great measure all other building material for general construction?

H. S. PALMER.

Walton Granolithic-Stone Machine.

It is easy to realize the vast importance of concrete-stone making. This form of building material, although introduced but a few years ago, is now in great demand, and every day it is being more largely used in all the avenues of contractors' and builders' work. The economy, permanency and practicability of concrete stamp



BLOCKS MADE BY WALTON GRANOLITHIC-STONE MACHINE.

it as the coming material for all classes of construction. There are a number of machines offered for the manufacture of the stone, and the invention of E. M. Walton is one that is of considerable interest to all who are concerned in this class of devices. Mr. Walton advocates the principle that the cementitious properties of Portland cement are vastly superior in endurance to that element in nature which holds the atoms together in natural stone, which

accounts for the wonderful durability of the manufactured product. The Walton Granolithic-Stone Machine has features that will appeal especially to those who have had experience with granolithic-stone machines. It can be operated by one man and produce from 100 to 150 blocks per day, needing no especial skill for its manipulation. It automatically forms the mold and relieves the block, each action requiring but a second. Mold plates are forced positively and accurately into position, and insure clean, hard and sharp corners, making blocks geometrically true in all their angles. The Walton machine is easily and quickly adjusted for all lengths and shapes within the dimensions of the machines, and but one set of bearing plates is required, as all shapes, sizes, lengths and widths are made on the same plate. There are many other details of the machine that point to its merit.

In general it may be said that the Walton Granolithic-Stone Machine is automatic and adjustable; makes lengths from 4 to 32 inches, and 3, 4½, 6 and 9-inch heights, 10, 12, 14 and 16-foot radius circles, and 30 and 45-degree angles; all widths by lapping blocks; all shapes, lengths and widths made on the same pallet; reducing cores save material. The Walton is manufactured by the Walton Granolithic-Stone Machine Co., 2500 East 18th street, Kansas City, Mo., which company invites requests as to how its machine saves labor, material, pallets, expensive facings, and eight cents per cubic foot in manufacturing the blocks. An accompanying illustration shows a wall built of blocks made on the Walton machine. It shows the system of wall construction with the Walton L blocks, which overcomes capillary attraction and insures a waterproof wall. There are no points of contact between the inner and outer block, with a 40 per cent. continuous air space.

Modern Sand-Lime Bricks.

That artificial stone could be made out of sand and lime is a fact that has been known since olden times. In the ruins of Salomo temple, near Jerusalem, well-preserved remains of artificial sandstone masonry are found. Thousands of years have not been able to destroy these masses

and in the United States the demand for it is rapidly increasing. Sand-lime brick plants are being established in all parts of the country to meet the conditions. Briefly, the modern process of manufacturing the bricks is as follows:

The sand is put into a mixer and lime is added to the sand, and after being mixed thoroughly it is conveyed to a large silo,

continuous and automatic in its operation, so that the materials are not handled after they are fed into the measuring device until the perfectly-formed brick are taken from the press. The prepared material is fed automatically into a heavy, specially-constructed press, which forms the brick under extreme pressure and delivers them on top of revolving table of machine. They

move any loaded car, even up grade, with the Giant Car-Mover, illustrated herewith.

The Giant Car-Mover has a sliding wedge which holds what the lever gains; this is very important in case you have to move a car up grade.

The Giant Car-Mover is sold direct to the consumer from the manufacturer with a guarantee that any malleable part broken in ordinary use within six months from date of invoice will be replaced.

The M. Mithkun Company, Detroit, Mich., owns the patent on the Giant Car-Mover and manufactures it. Full particulars of this and other specialties can be had by writing to the company for its monthly publication, The Railway Equipper, which is mailed to all who desire to keep posted on railway equipment.

Concrete-Block Wall.

Contractors and others using concrete blocks will doubtless be interested in the accompanying illustration of a section of a wall made from concrete building blocks. The wall shows two "swells," one made of "circle" and the other of "octagon" blocks. These blocks are only a few of the shapes made by the machine of the Waterloo Concrete Brick & Block Machine Co. of Waterloo, Iowa. Another feature of the Waterloo machine is that it makes a block with a vertical and a horizontal opening, which makes a double and continuous airspace. This greatly increases the value of the block. The Waterloo machine is simply and quickly operated, requiring only one movement of the lever. It has a brick attachment which makes 18 brick at one time, virtually giving two machines in one.

O. H. Sweeney is secretary for the com-



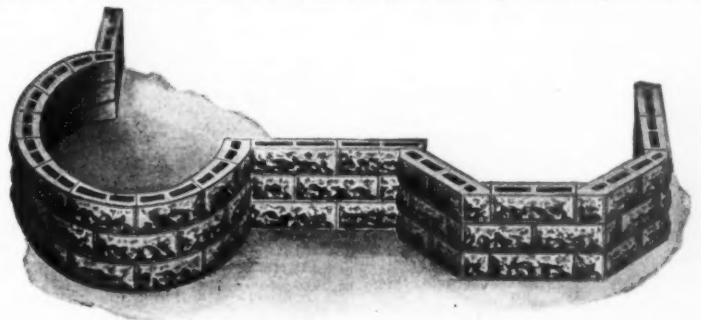
MODERN PLANT FOR MAKING SAND-LIME BRICKS.

and from there taken in a long sand conveyor to the large rotary table presses. The sand is then pressed into the shape of bricks and taken from the top of the presses and loaded onto cars. These cars are rolled inside of a large cylinder which contains about 10,000 brick. After the tank had been loaded the removable head on one end of the tank is securely bolted to the shell, after which the steam pressure of 125 pounds to the square inch is kept on over night. In the morning the head is taken from the tank and the brick are removed and ready to be placed in the wall, thereby making brick practically in 10 hours.

The whole process is extremely simple, but it is very interesting. The big cylinders, asbestos-covered to retain the heat, are fitted up with regular tracks inside for the movement of the trucks filled with brick. The bricks themselves are pressed out as regularly and methodically as can be, coming up through the molds of the presses perfect in form and size. The

are then picked off by hand and placed on specially-constructed cars. This is the only handling they receive during the entire process.

Under the heat, moisture and steam pressure a chemical combination takes place between the silica of the sand and the lime, forming calcium silicate and hardening the brick into stone; in fact, forming an artificial sandstone which is harder than the natural stone and is not



SECTION OF CONCRETE-BLOCK WALL.

subject to disintegration or decay from the action of the atmosphere.

The Semisteel Co. of Cleveland, Ohio, manufactures the sand-lime brick machinery referred to, and is desirous of giving further details as to its equipments to all present and prospective brickmakers. An accompanying illustration shows a building erected of sand-lime brick. Another shows a three-unit plant erected by the company for brickmakers.

The Giant Car-Mover.

Car-movers are a necessity for any firm receiving or shipping carload lots. The

pany, and he will send full information and illustrations of the machine and blocks to inquirers.

Fifteen Years in Boston.

Some comparisons showing Boston's growth in 15 years have been embodied in a pamphlet circulated by Whitcomb, Wead & Co. of that city. It shows an increase in population from 446,507 to 612,000, and in assessed valuation of property from \$822,026,100 to \$1,237,038,851.

The Gonzales (Texas) Business Men's Club has been organized with Messrs. R.



CONSTRUCTED OF MODERN SAND-LIME BRICK.

of lime and sandstone, but they have become harder and firmer in the course of time.

These facts have been given greater attention in recent years than ever before, and inventors have succeeded in perfecting machinery for manufacturing building stones from lime and sand. This class of building material is now extensively used,

cost is said to be about \$3 and less for the making of 1000 brick.

By the modern methods various mixing, measuring and grinding machines are used for preparing the sand and lime and for mixing it in the proper proportions in large quantities. This part of the work is very important, and special machinery has been designed for the purpose that is

switch engine may place your car near where you want it, but if it has to be moved to a more convenient location, that duty devolves upon the shipper or receiver. If it is a loaded car, look at the number of men required and the expense to move the car. One man or a boy can

H. Remschel, president; J. D. Sayers, first vice-president; B. M. Peck, second vice-president; A. H. Fitzgerald, recording secretary; T. F. Harwood, W. M. Fly, A. H. Fitzgerald, D. L. Beach, J. H. Boothe, F. O. Smith, A. Kleine, R. S. Dilworth and W. P. Fischer, directors.



THE GIANT CAR-MOVER.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Large Tract Acquired.

The North Georgia Company, recently incorporated, has just acquired, through the Ryall Company, No. 150 Nassau street, New York, the timber lands of the Tallulah River Lumber Co., and will commence the manufacture of lumber immediately. The officers of this company are George M. Ryall of New York, president; Charles A. Rafter of Homer, Mich., vice-president and general manager, and Geo. L. Prentiss of New York, secretary and treasurer. The property acquired consists of 49,000 acres, and it is located in Rabun, Towns and Habersham counties, Georgia, and a small part in Clay county, North Carolina. Expert timber cruisers estimate this land will cut 325,000,000 feet of merchantable timber. The company has acquired an up-to-date saw-mill of 50,000 feet capacity per day, and will start operations as soon as the machinery can be delivered and set up. Mr. Rafter, the vice-president and general manager of the company, has had large experience in timber operations, principally in Michigan. He will be in charge of the active operations on the property acquired. The local office will be at Cornelia, Ga., where Mr. Rafter will make his headquarters.

Mill Improvements.

It is announced that the receivers of the Kirby Lumber Co. of Houston, Texas, are arranging to make extensive improvements and additions to the several mills of the company in East Texas. The Orange mill of the company has been sold, the management thinking it more advisable to sell this mill and give more attention to those mills nearer the timber supply. Among the improvements contemplated is the reconstruction of the Brownell mill, for which plans have been prepared. This mill was burned last summer. The mill at Mobile, Texas, will also be rebuilt and enlarged, giving it twice its present capacity, while the one at Fuqua will be enlarged to double its present capacity. It is the purpose of the management to have all the improvements, including overhauling all the mills and rebuilding and enlarging those mentioned, within 60 days. Between \$375,000 and \$500,000 will be expended for the work.

South Carolina Lumbermen.

At a meeting of the South Carolina Lumber Association, to be held at Sumter, S. C., on the 14th of this month, a proposition will be received from the North Carolina Pine Association to form a combination with it. A committee composed of P. J. Camp of Franklin, Va.; A. G. Cramer of Suffolk, Va., and J. R. Walker of Norfolk has been appointed by President John L. Roper of the North Carolina Pine Association to take up the matter of consolidation. Because of the scarcity and inferiority of the negro labor now used by the saw-mills of the State, it is understood that the mills are contemplating the substitution of foreign labor. With this idea in view the announcement is made that E. J. Watson, State commissioner of commerce and immigration, will appear before the association and make a proposition for supplying the required labor, mainly of Swedes, Hungarians, etc.

Plants for Memphis.

A site has been secured at New South Memphis by the Murdock Lumber Co., which will erect a lumber-manufacturing plant to cost between \$30,000 and \$40,000. The company will begin immediately the construction of a band and saw-mill

plant, equipping it with improved machinery. There will be side-tracks and switches making connection with every railroad entering the city. No furniture or hardwood will be manufactured, but the plant will engage solely in sawing lumber and preparing it for the factory. Col. I. F. Peters, commissioner of the Industrial League of Memphis, has completed negotiations with the G. B. Lesh Manufacturing Co. of Warsaw, Ind., to remove its plant from that city to Memphis. A site has been secured, and work of construction will begin at once. The company will employ about 125 hands.

Erecting Lumber Plant.

The Laurel Fork Lumber Co. of Waynesville, N. C., has placed orders for machinery for a saw-mill plant which it is erecting at Waynesville. The main building will be 100x30 feet, the engine and boiler house to be separate. A dry-kiln will be erected later, and probably a small woodworking shop, the size of which has not yet been determined. Capacity of the band mill will be 35,000 feet of lumber daily, and the product will be poplar, oak, chestnut, basswood and hemlock lumber. The company will ship the output of its mill from Waterville, N. C., on the Tennessee & North Carolina Railroad, reaching the Southern Railway at Newport, Tenn. Its timber holdings are in Haywood county; officers, H. V. Otto, president; George H. Manlove, vice-president; J. M. MacRae, secretary, treasurer and general manager.

Hartsville Shipments.

Shipments of lumber from Hartsville, Tenn., are continually increasing, and from now on, it is said, the business will be more active than ever, due in a measure to the amount of building operations going on in the vicinity of that city and elsewhere. It is estimated that for the next year not less than 5,000,000 feet will go out from that market. Several lumber companies are operating at Hartsville, and it is stated that a Northern company has prepared to establish a large lumberyard capable of holding several million feet. Much of the stock is brought from Macon county, and is of fine quality, some of it being used to supply the export trade.

Woodworking at Memphis.

L. P. Arthur, E. E. Goodlander, Levi Joy, H. B. Anderson and T. B. Allen, business men of Memphis, Tenn., have made application for a charter for the Arthur Hardwood Flooring Co., to have a capital stock of \$50,000. The company contemplates the establishment at Memphis of a hardwood flooring plant which will engage exclusively in the manufacture of that product. The addition of this plant to the list of similar ones in operation in Memphis lends encouragement to the belief that that city, with its immense timber resources, will eventually become one of the leading woodworking centers of the country.

Wood-Distilling Plant.

Reports state that the plant of the Wood Distillates & Fiber Co., which has been under construction at Orange, Texas, for several months, is nearing completion, and will in all probability be in full operation by August 1. It is the purpose of the company to manufacture turpentine and by-products by subjecting the refuse material that is not utilized for lumber to a process of heat and pressure. It is said that the substance left can very easily be worked into paper pulp.

Big Timber Sale.

Negotiations for the sale of timber rights on 13,000 acres of land in Terra-

bonne and Lafourche parishes, Louisiana, has been completed by the W. H. Norris Lumber Co. of Houston, Texas. The purchaser is the St. Louis Cypress Lumber Co., Ltd., Frederic Wilbert of Plaquemine, La., president, and T. A. Garrons of Houma, La., vice-president and general manager. Included in the transfer, the terms of which have not been made public, are a number of buildings. The purchasing company is already operating a large cypress mill at Houma.

Retail Lumber Dealers.

The Retail Lumber Dealers' Association of Tennessee and Alabama will hold its next semiannual meeting at Chattanooga, Tenn., August 20 and 21. It is expected that more than 100 of the leading lumber dealers of the two States named will be in attendance. The officers are: Richard Randolph, Birmingham, Ala., president; Charles C. Heidt, vice-president; W. E. Wailes, Birmingham, Ala., secretary and treasurer. Messrs. J. P. Jordan of Memphis, W. J. Wallace of Nashville and W. L. Murphy of Knoxville are members of the board of directors.

To Erect Saw-Mill.

Advices from Beaumont, Texas, announce that the Vaughn Lumber Co., which owns several thousand acres of pine timber land on the Neches river east of Rockland, has completed arrangements with a lumberman for the establishment by the latter of a saw-mill plant of large capacity at Bowden Lake. It is said that the lake, which is full of water all the year, offers exceptional advantages as a site for a mill, and with the building of a few miles of tramway enough timber would be accessible to furnish a supply for several years.

Stave Company Incorporated.

Messrs. John S. Rainey, Hart D. Newman, John H. Fulton, Eugene H. LaPice, George Q. Whitney and associates have incorporated the Lucas E. Moore Stave Co. of New Orleans, La., with a capital stock of \$110,000. The first board of directors is Lucas E. Moore, William K. Knox, Willerton P. Toung, John H. Fulton and William J. Poitevent, of whom Lucas E. Moore, William K. Knox and William P. Toung are president, vice-president, and secretary and treasurer, respectively, of the company.

New Company.

A charter for the incorporation of the Rees-Scott Company, Ltd., with a capital stock of \$50,000, has been prepared by H. Garland Dupre and filed with the recorder of conveyances at New Orleans, La. It is the purpose of the company to deal in staves and cooperage material, lumber, timber, etc., and begin active operations as soon as \$30,000 of the capital stock shall have been subscribed. The officers and directors are: T. Thomas Rees, president; W. A. Scott, vice-president; J. J. Bayle, secretary.

Lumber Notes.

The Sabine Tram Co. of Beaumont, Texas, turned out about 4,500,000 feet of lumber for the month of June.

At Charleston, S. C., Messrs. R. L. Montague, A. T. Smythe and R. P. Tucker have incorporated the Midland Timber Co., with a capital stock of \$150,000.

The British schooner Brooklyn cleared last week from the port of Wilmington, N. C., for Trinidad with a cargo of 250,000 feet of lumber consigned by the Kidder Lumber Co.

The Industrial Lumber Co. of Beaumont, Texas, is loading three vessels at Sabine Pass for export trade. The company will also load a schooner at Galves-

ton about the middle of the month, putting on a cargo of 250,000 feet of lumber.

Mr. Edward Olcott of London announced at Memphis, Tenn., that he had shipped 75,000 tons of red-gum lumber from Mississippi to London for the purpose of paving the streets of that city.

Through J. B. White, general manager of the Missouri Lumber & Land Exchange Co. of Kansas City, the Louisiana Central Lumber Co. of Clarks, La., has purchased from the Louis Werner Saw-Mill Co. of St. Louis 30,000 acres of yellow-pine timber lands.

Cotton-Oil Mill Sold.

Dispatches from Houston, Texas, state that a deal has practically been completed for the sale of the National Cotton Oil Co.'s mills to the Industrial Cotton Oil Co., a New York corporation with a permit to do business in Texas. The sale affects not only the Houston properties, but also the plants in Denison, Hearne, Waco, Seguin and Galveston. Main offices will be maintained at Houston. It is understood that Harry C. Cornwall and Richard Heydt, both of New York, have been elected president and secretary, respectively, of the company, and J. S. Frierson, formerly manager of the mill at Denison, will assume the management of the Hearne plant, exchanging positions with Ben Cash, manager of the Hearne mill, who will become the manager of the mill at Denison. It is stated that the Southern Cotton Oil Co. of Houston has also been sold, the name of the purchasing syndicate not being given.

Fertilizer Plant in Operation.

What promises to be a successful enterprise for Tupelo, Miss., is the Tupelo Fertilizer Co.'s plant, which has just begun active operations. The stockholders of the company, which was organized with a capital stock of \$150,000, recently had a meeting at which permanent organization was effected. Officers were elected as follows: John Clark, president; John M. Allen, vice-president; C. R. Strain, general manager; L. M. Bogle, secretary and treasurer. The following board of directors was elected: John Clark, J. M. Allen, C. P. Long, J. Q. Robins, J. R. Dabbs, W. D. Anderson, C. R. Strain, F. C. MeGuaghey, L. M. Bogle, C. W. Troy, E. C. Hinds, J. A. Wiygul and J. D. Bryan, Nettleton; Z. M. Stevens and N. Fitzpatrick, New Albany; W. Ogden, Sulligent, Ala.; S. M. Barnett, Booneville. The plant receives and consumes daily about 50,000 pounds of phosphate rock, having a weekly capacity of 250 tons of acid phosphate.

Purchasing Phosphate Lands.

Dispatches from Beaufort, S. C., announce that the Virginia-Carolina Chemical Co. of Richmond, Va., is reported to have purchased the Pacific plantation from the Coosaw Company. The property includes extensive marsh lands which contain valuable deposits of phosphate. This purchase is said to be one looking to the buying up of all phosphate-bearing lands that can be had, which is made necessary by the fact that the Florida and Tennessee deposits are decreasing.

Making Axle Steel.

For several months past the Gadsden (Ala.) plant of the Alabama Steel & Wire Co. has been busily engaged manufacturing and rolling axle steel. It is stated that some 35,000 tons have been shipped recently, and all the product has proven satisfactory, not one axle being returned. The plant is moving smoothly, and more laborers are said to be needed.

During the past fiscal year at least \$1,000,000 has been expended in building improvements in Macon, Ga.

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item is printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and more attention than a mere circular.

BALTIMORE BUILDING NOTES.

Business Buildings.

Baltimore—Store and Office Building.—E. B. Hunting, 213 Courtland street, has awarded contract to J. H. Walsh & Bro., 321 Clay street, for the construction of store and office building at southeast corner Baltimore and Gay streets; two to four stories high, 67x109 feet; brick with stone trimmings; steel beams and girders; cast-iron columns; electric wiring and fixtures; sanitary plumbing; heating system.

Baltimore—Warehouse.—The Louis Becker Company, 1523 West Baltimore street, has awarded contract to Henry Smith & Sons Company, 116 South Regester street, for the construction of warehouse at southwest corner Light and German streets; five stories, 34x105 feet; brick with brownstone to second story and terra-cotta trimmings; mill construction; electric wiring and fixtures; sanitary plumbing; heating system; elevator; Charles E. Cassell & Son, architects, 411 North Charles street.

Baltimore—Store and Office Building.—Charles P. Muth, 23 South Charles street, has purchased lot on northwest corner Lexington and Gay streets and will erect eight or nine-story store and office building on the site, which is 31x165 feet.

Baltimore—Dwellings.—Walter L. Westphal, 1700 North Bond street, will erect 17 dwellings on Curley street near Fayette street; two stories, 12x40 feet; cost about \$12,000.

Baltimore—Warehouses and Office Building.—The Johns Hopkins Hospital Trust Estate, Calvert Building, Fayette and St. Paul streets, has awarded contract to W. E. Burnham, Builders' Exchange Building, 2 East Lexington street, for the construction of office building and eight warehouses on Lombard, Gay and Frederick streets; five stories, 60x166 feet; brick with Indiana limestone and terra-cotta trimmings; steel beams and girders; cast-iron columns; metal frames and sashes; vault lights; fire-escapes; sanitary plumbing; electric wiring and fixtures,

plumbing, heating system and elevators not in contract; cost about \$100,000; Archer & Allen, architects, Central Savings Bank Building, 3 East Lexington street.

Baltimore—Warehouse.—C. Sheehan & Son, 117 East Center street; W. N. Hildebrand, Lobe Building, 15 South Gay street; George Bunnecke & Sons, 305 St. Paul street; Henry Rippel, 7 Clay street; John A. Sheridan Company, 321 North Holliday street, and James Worthington, 120 North Calhoun street, are estimating on construction of warehouse on North street near Pleasant street for the Farber estate, Edwin J. Farber, trustee, Fidelity Building, Charles and Lexington streets; five stories, 33x76 feet; brick with galvanized-iron trimmings; steel girders; cast-iron columns; slag roof; metal frames and sashes; electric wiring and fixtures; sanitary plumbing; elevator not in contract; D. E. O. Kubitz, 1904 North Washington street, architect; bids to be in July 15.

Baltimore—Office Building.—John Redwood, 208 East German street, as trustee for the Lee estate, has commissioned Parker & Thomas, Union Trust Building, Charles and Fayette streets, and Worthington & Ahrens, 8 East Lexington, as associated architects, to prepare plans and specifications for office building to be erected at northeast corner Baltimore and Calvert streets; about three stories, 52x64 feet.

Baltimore—Apartment-house.—Dr. John R. Abercrombie, 827 North Eutaw street, has awarded contract to Melver & Piel, Builders' Exchange Building, 2 East Lexington street, for the reconstruction of dwelling at 827 North Eutaw street into an apartment-house and the construction of an addition in the rear; four stories, 24x100 feet; brick with stone trimmings; electric wiring and fixtures; sanitary plumbing; hot-water-heating system; electric elevator; cost about \$35,000; Owens & Sisco, architects, 14 East Lexington street.

Baltimore—Store Building.—J. M. Berry, 25 St. Paul street, as agent, has awarded contract to A. M. Carroll, 719 Lennox street, for the construction of store building at southwest corner Fayette and St. Paul streets; four stories, 23x50 feet; brick with terra-cotta trimmings; reinforced concrete construction; tin roof; electric wiring and fixtures; sanitary plumbing; heating system; elevator; T. Buckler Ghequier, architect, 227 St. Paul street.

Baltimore—Dwellings.—A. Parlett Lloyd, 227 St. Paul street, will erect 2½-story dwelling at Windsor avenue and 12th street, to cost about \$7000.

Baltimore—Warehouse.—Arthur W. Maehen, Jr., Central Savings Bank Building, 3 East Lexington street, as agent, has awarded contract to John E. Marshall & Son, Vickers Building, German street, near South street, for the construction of warehouse at 111 and 113 South Gay street; four stories, 55.6x80.2 feet with a rear extension 10x54 feet; brick with stone trimmings; steel beams; cast-iron columns; slag roof; electric wiring and fixtures; sanitary plumbing; elevator; cost about \$25,000.

Baltimore—Lunchroom.—James A. Whitcomb (I. A. Miller, agent, 11 East Saratoga street) has awarded contract to John Hiltz & Son, 3 Clay street, for construction of lunchroom at 118 and 120 East Baltimore street; two stories and basement, 40x104 feet; granite exterior; steel-frame construction; reinforced concrete floors and fireproofing; tile roof; metal frames and sashes; electric wiring and fixtures, plumbing and heating not in contract; cost about \$75,000; Charles E. Cassell & Son, architects, 411 North Charles street.

Baltimore—Warehouses.—German & Co., 27 St. Paul street, are estimating on the construction of two warehouses at 702 and 704 West Lombard street for David M. Newbold of Paes & Newbold, Equitable Building, Calvert and Fayette streets; four stories, 46x75 feet; brick with stone trimmings; cost about \$30,000.

Baltimore—Interior Finish, etc.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will receive bids until August 14 for the interior finish for the United States custom-house, in accordance with drawings and specifications, copies of which may be had on application at the discretion of the supervising architect, or at the office of Hornblower & Marshall, architects, 1509 H street N. W., Washington, D. C. Certified check for \$200 must accompany each application for drawings and specifications.

Baltimore—Dwellings.—David and Joseph Hechinger, 808 Low street, have commissioned Louis Levi, architect, Union Trust Building, Charles and Fayette streets, to prepare plans and specifications for two dwellings to be erected at West Arlington, a suburb of Baltimore.

Baltimore—Store Building.—Charles Gilpin, Union Trust Building, Charles and Fayette streets; George Bunnecke & Sons, 305 St. Paul street; Henry Rippel, 7 Clay street; W. E. Burnham, Builders' Exchange Building, 2 East Lexington street; Henry Smith & Sons Company, 116 South Regester street; Brady & Watters, 532 St. Paul street; Murphy Construction Co., 202 West Fayette street; Wells Bros. Company, Union Trust Building, Charles and Fayette streets; B. F. Bennett, 123 South Howard street; Geo. A. Fuller Company, American Building, Baltimore and South streets; Willis & Mason, 22 East Lexington street; C. L. Stockhausen, National Marine Bank Building, Gay and Water streets; Morrow Bros., 212 Clay street; Trussed Concrete Steel Co., 612 North Calvert street, and Wm. Steele & Sons, 17 West Saratoga street; Cramp & Co., 407 St. Paul street; J. H. Miller, 110 Dover street; Norcross Bros. Company, Equitable Building; James Stewart & Co., 319 North Charles street; John A. Sheridan Company and Edwin Gilbert & Co., Land Title Building, Philadelphia, Pa., are estimating on store building to be erected at corner Baltimore and Hanover streets for Isaac Hamburger & Sons, Baltimore and Howard streets; eight stories, 67.5x148.5 feet; brick with Indiana limestone and terra-cotta trimmings; steel-frame construction with concrete or terra-cotta floor arches and fireproofing; slag roof; ornamental iron; package conveyor; skylights; metal frames and sashes; sanitary plumbing; alternate bid on reinforced concrete construction; electric wiring and fixtures, heating system, elevators and sprinkler system not in contract; bids to be in 3 P. M., July 27; Simonson & Pletsch, architects, American Building, Baltimore and South streets.

Baltimore—Dwelling.—W. E. Burnham, Builders' Exchange Building, 2 East Lexington street; Wm. H. Wells, 211 North Liberty street; Thomas L. Jones & Son, 410 West Saratoga street; Edward Brady & Son, 1113 Cathedral street; Ignatius Smith, 203 St. Paul street, all of Baltimore, Md.; Roland Park Co., Roland Park, Md.; Gladfelter & Chambers, Woodberry, Md.; Fowble & Kirby, Cockeysville, Md., are estimating on construction of dwelling at Roland Park (a suburb of Baltimore) for B. W. Corkran, Jr., 1411 Eutaw Place; two and one-half stories, 74x51 feet; brick and stucco exterior with stone trimmings; slate roof; electric wiring and fixtures; sanitary plumbing; heating system; bids to be in July 24; Elliott & Emmart, architects, Union Trust Building, Charles and Fayette streets.

Baltimore—Store Buildings.—Nathan Gutman & Co., 15 and 17 West Lexington street, have awarded contract to George Bunnecke & Sons, 305 St. Paul street, for the remodeling of store buildings at 9, 11, 13, 15 and 17 West Lexington street, converting them into one building. Two additional stories will be added; entire fronts rebuilt; electric wiring and fixtures; sanitary plumbing; heating system; elevators; Charles M. Anderson, architect, 324 North Charles street.

Baltimore—Dwellings.—Theodore and H. W. Cooke, 914 North Charles street, will erect 30 dwellings on Jackson street; two stories, each 12x44 feet; cost about \$30,000.

Baltimore—Dwelling.—Henry V. Bouie, teller United States Subtreasury, Fayette and North streets, has commissioned Wyatt & Nolting, architects, Builders' Exchange Building, 2 East Lexington street, to prepare plans and specifications for dwelling to be erected at Roland Park (a suburb of Baltimore); two and one-half stories; frame construction on stone foundation; electric wiring and fixtures; sanitary plumbing; heating system.

Baltimore—Grandstand.—Bosley Bros., Towson, Md., have been awarded contract for the construction of grandstand at Gentlemen's Driving Park at Arlington (a suburb of Baltimore); frame construction on stone foundation, 30x110 feet; J. S. Nussear, architect, 7 Clay street.

Baltimore—Parish-house.—The St. Bartholomew's Protestant Episcopal Church, Wm. P. Dame, rector, 1125 West North avenue, will erect parish-house at northeast corner Gold and McCulloh streets.

Baltimore—Warehouse.—James Farley, 207 North street; Eugene D. Springer, 424 South

Charles street; Edward Brady & Son, 1113 Cathedral street; John T. Buckley, 916 Bolton street; Morrow Bros., 212 Clay street, and George Bunnecke & Sons, 305 St. Paul street, are estimating on construction of warehouse at 17 South Charles street for C. W. Abbott & Co., 206 South Charles street; five stories, 19x168 feet; brick with stone trimmings; steel beams; electric wiring and fixtures; sanitary plumbing; heating system; bids to be in July 19.

Baltimore—Store and Office Building.—Thomas O'Neill, Charles and Lexington streets, has awarded contract to the George A. Fuller Company, American Building, Baltimore and South streets, for the construction of store and office building at 30 North Charles street; six stories, 47.8x119.2 feet; Indiana limestone exterior; reinforced concrete construction of floors, beams, columns and girders; slag roof; ornamental iron; vault lights; bronze grilles; galvanized-iron skylights; interior marble; metal frames and sashes; mail chute; heating, ventilating, gas and electric work, plumbing, elevators and lift not in contract; cost \$125,000; Baldwin & Pennington, architects, 311 North Charles street.

Manufacturing Buildings and Other Enterprises.

Baltimore—Horseshoe Factory.—The Sanitary Horseshoe Co. has been incorporated with an authorized capital stock of \$20,000 to manufacture horseshoes and other appliances to protect the feet of horses by Clifford Burton, 2126 Morris street; James O'Neill, 409 Orchard street; Charles L. Skinner, George H. Hardesty, and Isaac S. White, 2213 Oak street.

Baltimore—Printing and Publishing.—The Kelly-Benson Company, 1 South Hanover street, has been incorporated with an authorized capital stock of \$30,000 to conduct a printing, publishing, office-outfitting and stationery business and the manufacture of blank books. The officers of the company are James T. Kelly, president; W. Eason Williams, secretary and treasurer, who, together with Wm. Benson, E. C. Woolman, F. A. Dolfeld, James T. Verna and W. E. Sherwood, constitute the board of directors. This company takes over the business of the Cushing Company and the firm of Kelly & Benson.

Baltimore—Fruit Company.—The Italian Fruit-Dealers' Association has been incorporated with an authorized capital stock of \$20,000 to deal in fruits by Joseph Catanesi, 279 Lafayette Market; Peter Vincel, Fulton avenue and Francis street; Nicola Vito, 626 North Chester street; Antonio L. Cortese and Antonio Lorenzo, 606 West Lexington street.

Baltimore—Publishing.—The National Farm & Poultry Journal Co. has been incorporated with an authorized capital stock of \$1000 by Stanley A. Foutz, 8 East Lexington street; John T. Morris, 8 East Lexington street; H. M. Foutz, Harvey G. Foutz, Sidney Norris and Edward F. Milholland.

Baltimore—Real Estate.—The Realty Corporation has been incorporated with an authorized capital stock of \$25,000 to deal in real estate by Frank M. Widner, Jr., Calvert Building, Fayette and St. Paul streets; John A. Wright, B. Howard Richards, Thomas E. Jenkins and Joseph E. Wright.

Baltimore—Telephone System.—The Maryland Telephone Co., Maryland Telephone Building, Lexington and Courtland streets, will expend over \$300,000 in improving and extending its telephone system. Cable wire, poles, telephone instruments and switchboards will be installed.

Baltimore—Boiler and Engine House.—Jacob Stehler, table manufacturer, 405 West Barre street, will erect boiler and engine house at 508 South Eutaw street; one story, 18.6x43.6 feet; brick with tin roof.

Baltimore—Brass Foundry.—Monmonier & Sorrell, 308 Laurens street; Henry Rippel, 7 Clay street; W. N. Hildebrand, Lobe Building, 15 South Gay street; James C. Smith, 1601 North Broadway; A. Knell, Jr., 213 St. Paul street, and John T. Buckley, 916 Bolton street, are making revised estimates for the construction of three-story addition to brass foundry at 315 North street for Edro Richardson, 318 N. Holliday street. Full details recently mentioned. Henry J. Tinley, architect, Hoffman Building, 11 East Lexington street.

Baltimore—Pickle Factory.—The Donaldson-Schultz Company, manufacturers of vinegar and pickles, 404 South Charles street, has engaged the Woodruff-McLaughlin Company, 100 East Lexington street, to prepare plans and specifications for and superintend

the construction of factory at 32 and 34 East Montgomery street; three or four stories, 50x100 feet; brick with stone trimmings. Power plant and machinery for the manufacture of vinegar will be installed.

Baltimore—Pickle Factory.—Donaldson-Schultz Company, 404 South Charles street, has purchased lot at 32 and 34 East Montgomery street, and will erect a modern pickle factory on the site, which is 50x200 feet. The plant will employ about 150 hands and will have a capacity of 300 barrels a day.

Baltimore—Telephone Exchanges.—The Chesapeake & Potomac Telephone Co., 711 St. Paul street, will erect an addition to its exchange on Madison avenue, near Robert street, and will install switchboards, increasing its capacity to 12,000 telephones. The switchboards in the Gilmor exchange will also be increased 12,000 capacity.

Baltimore—Manufacturing.—The De Fontes Manufacturing Co. has been incorporated with an authorized capital stock of \$50,000 to develop patented novelties and deal in furniture by Duane H. Rice, 318 North Gay street; Lewis G. Rice, 318 North Gay street; Wm. H. Green, Francis De Fontes, 322 North Gay street, and Robert L. Gill.

Baltimore—Bakery.—Rice Bros., 312, 314 and 316 North Gay street, have awarded contract to J. A. Sheridan Company, 321 North Holliday street, for the reconstruction of old building and the erection of a new addition. New ovens and machinery will be installed; Owens & Sisco, architects, 14 West Lexington street.

Baltimore—Coal-tar-products Factory.—H. C. Shelley, 2224 Druid Hill avenue; B. W. & E. Minor, 20 Clay street, and Lorenz Schenlein, 2217 East Baltimore street, are estimating on the construction of factory at 623 South Caroline street for H. Noble & Co., manufacturers of coal-tar products; two stories, 30x71 feet; brick with stone trimmings; slag roof; bids to be in July 18; J. C. Spedden, architect, 509 South Paca street.

Baltimore—Brewery.—Frederick Bauernschmidt, proprietor American Brewery, Hillen street near Forrest street, has commissioned the Frederick W. Wolf Company, architects, 139 Rees street, Chicago, Ill., to prepare plans and specifications for the construction of two-story bottling plant, 100x160 feet, on Abraham and Monument streets, and also for the alterations to warehouse at Harford avenue and Monument street, in which all the machinery and refrigerating plant will be installed. These improvements will double the capacity of the plant.

Baltimore—Sun Building.—The A. S. Abell Company, proprietor of Baltimore Sun, has awarded contract to Edward Brady & Son, 1113 Cathedral street, for the construction of newspaper building at southwest corner Baltimore and Charles streets; three stories with basement and attic, 52x202 feet; Indiana limestone exterior with granite base; steel-frame construction with terra-cotta floor arches and fireproofing; slate and tile roof; interior marble; metal frames and sashes; ornamental iron; vault lights; metal lockers; metal skylights; terrazzo floors; heating, ventilating, plumbing, gas and electric work, elevators, lifts and press foundations not in contract; cost \$283,206; Baldwin & Pennington, architects, 311 North Charles street.

Baltimore—Real Estate.—The Henry Smith Estate Company has been incorporated with an authorized capital stock of \$200,000 to deal in lands by Henry Smith, Jr., John A. Smith, Wm. A. Smith, all at 116 South Register street; George R. Galther and Leon E. Greenbaum.

Subbids Wanted.

Mention of contractors wanting subbids on construction work and material will be found, when published, in the "Machinery Wanted" column on another page under the heading of "Building Equipment and Supplies."

ALABAMA.

Albertville—Water-power-Electric Plant.—It is proposed to build a rock dam at Short Creek Falls, four miles from Albertville, and erect an electric plant to transmit electricity to Albertville for lighting and industrial purposes, for operating an electric railway, etc. The privileges in connection with this project will be offered to capitalists, and information regarding the proposition can be obtained by addressing E. O. McCord, secretary.

Bessemer—Foundry and Machine Shop.—Reports state that work on the erection of addition to the main buildings of the Bessemer Foundry & Machine Co. is progressing rapidly, and when completed it will be equipped for doubling the present capacity of plant. Louis Hoster is president and manager.

Birmingham—Drug Company.—Duncan Drug Co. has been incorporated with \$25,000

capital stock. J. J. Duncan is president; George T. Duncan, secretary and treasurer.

Birmingham—Cement Plant.—It is reported that Frederick H. Lewis, C. E. Staunton, Va., and J. Ross Hanahan, president Carolina Portland Cement Co. of Charleston, S. C., are investigating with a view to locating a \$400,000 Portland cement plant.

Birmingham—Millinery.—The Eagle Hat & Millinery Co. has incorporated with an authorized capital stock of \$15,000. Israel A. Kroneberg is president and treasurer; Israel Blocton, vice-president, and Max Gelbert Blocton, secretary.

Birmingham—Mercantile.—Charles G. Davis and others have incorporated the Davis-Richter Mercantile Co. with \$10,000 capital stock.

Boaz—Fertilizer Factory.—It is reported that the Boaz Chemical Co. has purchased the plant of the Boaz Fertilizer Co., which will be improved and operated, the capacity being increased to about 5000 tons annually.

Kingston—Lumber Plant.—The White Water Lumber Co. of Autaugaville, Ala., has absorbed the plant of the Kingston Mill Co. and will operate saw-mill 36x120 feet. Planing mill and dry-kilns will also be erected; daily capacity 30,000 feet of long and short-leaf pine; S. D. Dantzer, architect.

Lewisburg and Seales—Coke-oven Plant.—The Alabama Consolidated Coal & Iron Co., general offices at Birmingham, T. G. Bush, president, has awarded contract to the Oak Hill Marble and Stone Works of Birmingham for the construction of a modern coke plant at its Lewisburg mines, and for a similar plant at its Seales mines in Bibb county. It is stated that the expenditures will amount to about \$70,000. The plans call for 50 ovens at Lewisburg and 50 at Seales.

Mobile—Cold-storage Plant.—John P. Morrel & Co., it is reported, will erect cold-storage plant on site recently purchased.

River Falls—Turpentine Distillery.—River Falls Turpentine Co. has been incorporated with \$10,000 capital stock by G. B. Frierson, E. L. Moore of River Falls and W. W. Varn of Pensacola, Fla.

Russellville—Ice and Refrigerating Plant.—It is reported that the Alabama-Virginia Iron Co. contemplates erecting ice and refrigerating plant; daily capacity five tons.

Sheffield—Ice Plant.—The Bailey-Douk Hardware Co. is reported as to erect ice plant.

Tallahassee—Water-power-Electrical Plant.—The Montgomery (Ala.) Light & Power Co., it is reported, will expend about \$30,000 in installing additional machinery at its plant, including three water-wheels and a generator of 2000 horse-power, increasing the capacity to 5000 horse-power, which will be transmitted by electricity to Montgomery, a distance of 36 miles. Contract is said to have been awarded.

Tusculum—Sewerage System.—The city, it is reported, has engaged A. G. Negley, city engineer, Florence, Ala., to make surveys for sewerage system previously mentioned to be constructed.

ARKANSAS.

Fort Smith—Electrical Supplies.—Chartered: The Fort Smith Electrical Supply Co., with \$3000 capital stock. R. G. Hunt is president; W. R. Abbott, vice-president, and George Engel, secretary-treasurer.

Fort Smith—Amusement Company.—The Fort Smith Amusement Co. has incorporated with an authorized capital stock of \$50,000. George Sengel is president; W. R. Abbott, vice-president, and R. G. Hunt, secretary-treasurer.

Helena—Handle Factory.—The Rogers-Melzer Company is reported as erecting a handle factory.

Little Rock—Publishing.—The Arkansas Democrat Co. has increased capital stock from \$50,000 to \$100,000.

Pine Bluff—Cold-storage Plant.—Swift & Co. have let contract to C. E. Philpot for the erection of proposed cold-storage plant; building to be 60x120 feet, of brick and stone with concrete foundation.

Texarkana—Concrete-block Factory.—The Texarkana Concrete Building Co. has incorporated with \$10,000 capital stock. H. W. Hollenberg is president; W. H. Booth, vice-president, and Ralph G. Moore, secretary-treasurer.

FLORIDA.

Blountstown—Mercantile.—Incorporated: The Hentz Company, with \$10,000 capital stock, by H. B. Gaskin and others.

Crescent City—Woodenware Factory.—The Preston-Miller Company has been incorporated with \$30,000 capital stock to manufacture tubs, crates, packages, etc. C. H. Preston is president.

Jacksonville—Steam Laundry.—Chartered: Rico Steam Laundry, with \$50,000 capital

stock, by Joseph Richardson, W. H. Howard, Jr., and A. W. Collier, all of Atlanta, Ga., to take over and operate the Rico Laundry.

Jacksonville—Electric-power Plant.—It is reported that the city will install an additional 300-kilowatt motor generator for furnishing additional power. Address R. N. Ellis, superintendent.

Jacksonville—Road Building.—The Duval county commissioners have had surveys made by Roland Woodward, C. E., for the construction of a hard-paved surface road from Jacksonville to the beach, and it is estimated that \$100,380 will be required for building the road by the shortest route.

Lakeland—Naval Stores, etc.—I. B. Handley, W. W. Clyatt, J. C. Owens and others have incorporated the Handley Company with \$30,000 capital stock to deal in naval stores, etc.

Miami—Incorporated: The Miami Sponge Mattress-Pillow Co., with \$15,000 capital stock, by Lina Beecher, S. M. Tatum, E. V. Blackman and B. S. Tatum, to deal in sponge and other kinds of mattresses, pillows and cushions.

Pensacola—Real Estate.—The South Florida Land Co. has been incorporated with \$100,000 capital stock by Wm. H. Knowles, W. S. Keyser and J. M. Muldon.

Tallahassee—Ice Plant.—The Middle Florida Ice Factory is installing machinery for doubling the present capacity of 10 tons daily.

Tampa—Street Paving and Sewerage System.—City is completing arrangements for paving approximately 16 miles of streets and for constructing 17 miles of sanitary sewers, and bids for the work will be received until July 25; W. R. Fuller, president Board of Public Works.*

GEORGIA.

Atlanta—Telephone Exchange.—The Southern Bell Telephone & Telegraph Co. is having plans prepared for a five-story building of steel construction. It will have a capacity for 25,000 phones.

Atlanta—Express Company.—The People's Express Co. is being organized with \$300,000 capital stock by A. M. Brand and others.

Brunswick—Lumber Company.—The Forest Lumber Co. has been incorporated with \$10,000 capital stock by Albert Fendig, William Nussbaum of Brunswick and associates.

Columbus—Kaiting Mill.—Topsy Hoslery Mills of Tupelo, Miss., recently reported as to remove to Columbus, has let contract to the J. F. Gallivan Building & Construction Co. of Greenville, S. C., for erecting the buildings; main mill to be two stories high, 50x160 feet; dyehouse 50x75 feet, one story high; warehouse 25x100 feet, one story high; all standard mill construction; equipment, 85 knitting machines, to be increased later. Electricity will be the power used; J. E. Shirrine of Greenville, S. C., architect in charge.

Cornelia—Lumber Plant.—The North Georgia Company, recently incorporated with George M. Ryall of New York, N. Y., president; Charles A. Rafter of Homer, Mich., vice-president and general manager, and George L. Prentiss of New York, N. Y., secretary-treasurer, has acquired from the Tallulah River Lumber Co. 49,000 acres of timber land in Rabun, Towns and Habersham counties, Georgia, and in Clay county, North Carolina, together with a modern saw-mill of 50,000 feet daily capacity. As soon as the machinery is installed operations will begin. For the present correspondence can be addressed to the general manager, care of the Ryall Company, 150 Nassau street, New York.

Macon—Sanitary Milk Plant.—It is stated that site has been purchased on which to erect \$60,000 sanitary milk plant. Henry Lamar, John S. Hoge and E. W. Gould were reported last December as contemplating the organization of a stock company for this purpose.

Sparta—Electric-light Plant and Water-works.—It is reported that the city will vote on the issuance of bonds for the construction of electric-light plant and water-works. Address The Mayor.

Thomasville—Sash, Door and Blind Factory, etc.—A. T. Snodgrass & Co. contemplate establishing plant for the manufacture of sash, doors, blinds, window frames and general house-building material, to be operated in connection with planing mill.*

KENTUCKY.

Hopkinsville—Canning Factory.—The Hopkinsville Canning Co. has been incorporated, with \$15,000 capital stock.

Lexington—Broom Factory.—W. Worthington of Paris, Ky., is reported as to establish broom factory. It is stated that site has been purchased on which to erect a three-story building for this purpose.

Louisville—Real Estate.—Chartered: The Bell-Gregory Land Co., with \$50,000 capital stock, by James E. Bell, James P. Gregory and E. F. Weigel.

Louisville—Tobacco Factory.—The Weis-singer Tobacco Co. has been incorporated, with \$100,000 capital stock, by Henry Y. Weis-singer, William Marshall Bullitt and H. L. McHenry, to manufacture tobacco.

Louisville—Bicycle and Repair Company.—Incorporated: The Diamond Bicycle & Repair Co., with \$30,000 capital stock.

Louisville—Furniture Factory.—The Louisville Furniture Co. has been incorporated, with \$3000 capital stock.

Louisville—Photographing Company.—E. C. Drysdale, P. T. Archer, C. F. Munkle and others have incorporated the Louisville Photographing Co. with \$5000 capital stock.

Morehead—Timber-land Development.—The Chesapeake & Ohio Lumber Co. has been incorporated with \$20,000 capital stock for the development of a timber tract which it owns. John M. Craynor of Waycross, Ga., is president and general manager; J. B. Kelley of Morehead, vice-president, and L. C. Smith of Broadhead, Ky., treasurer.

Owensboro—Water-works Improvements.—It is reported that the Owensboro Water-Works Co., James J. Sweeney, president, will make improvements to water-works. It is proposed to develop a pure-water supply and construct a pipe line across the Ohio river; Owen Ford, Security Building, St. Louis, Mo., consulting engineer.

Owensboro—Harness and Saddlery Factory.—A company is reported as being organized, with \$75,000 capital stock, for the manufacture of harness and saddles, and John G. Delper is promoting the enterprise.

Paducah—Printing and Binding Company.—The Paducah Printing & Binding Co. has been incorporated with \$10,000 capital stock.

Sullivan—Telephone System.—The Sullivan Telephone Co. has been incorporated to operate telephone system.

Wingo—Telephone System.—Chartered: The Wingo Telephone Co., with \$1500 capital stock.

LOUISIANA.

Chalmette—Sugar Refinery.—American Sugar Refinery Co. has let contract to James Stewart & Co. of St. Louis, Mo., for the foundation work for the panhouse and filter-house; buildings to be of brick, steel and stone on a foundation consisting of 1616 piles. The panhouse will be 95x167 feet and the filter-house 265.6x89.9, and an engine-room 75x167 feet will be attached. This company was reported in April as having purchased site for the location of sugar refinery, and had bought plant at Camden, N. J., which would be removed to Chalmette and rebuilt on an enlarged scale at a cost of \$3,000,000 and operated with a daily capacity of 12,000 barrels.

Jeanerette—Oyster Cannery.—The Murphy Canning Co., Ltd., has increased its capital stock to \$500,000.

Lake Providence—Drug Company.—The Guenard Drug Co., Ltd., has been incorporated with \$25,000 capital stock. J. S. Guenard is president; Frank Byerly, vice-president, and H. Sidney Guenard, secretary-treasurer.

Lake Providence—Lumber Mill.—Incorporated: The Joseph L. Fischer Lumber & Manufacturing Co., Ltd., with Joseph L. Fischer, president; A. Frieschman, vice-president; capital stock \$10,000.

Mangham—Saw-mill.—The Richland Lumber Co. has begun the erection of its proposed hardwood saw-mill.

New Orleans—Lumber Company.—The Rees-Scott Company, Ltd., has incorporated with \$50,000 capital stock. J. Thomas Rees is president; W. A. Scott, vice-president, and J. J. Bayle, secretary.

New Orleans—Realty Company.—Xeter Realty Co., Ltd., has been incorporated with \$3200 capital stock by Joseph P. Goldsmith and others.

New Orleans—Engine Works.—T. W. Castleman is organizing company, with an authorized capital stock of \$100,000, for the manufacture of a gasoline engine under a new patent.

New Orleans—Stave Factory.—The Lucas F. Moore Stave Co. has incorporated with \$10,000 capital stock to manufacture staves, etc. Lucas E. Moore is president; William K. Knox, vice-president and general manager, and Willerton P. Toung, secretary-treasurer.

MARYLAND.

Baltimore—Pier.—The Western Maryland Railroad Co., it is reported, is having plans and specifications prepared for building an open pier at Port Covington; to be 600 feet long by 51 feet wide and have a slip 230

feet wide between the old and new pier. H. G. Clark, Baltimore, Md., is manager, and J. Q. Barlow, Cumberland, Md., chief engineer.

Cumberland—Natural-gas Main.—Henry R. Warfield, representing the Atlantic Natural Gas Co. of Morgantown, W. Va., has applied for franchise to furnish the city with natural gas; the gas to be conveyed by an underground system.

Monrovia—Coaling Station.—The Baltimore & Ohio Railroad Co., D. D. Carothers, chief engineer, Baltimore, Md., will rebuild coaling station at Reel's Mill, reported burned last week at a loss of \$8000.

Salisbury—Brick Works.—The Peninsular Brick Co. is making extensive improvements to its plant which will increase the daily capacity to 10,000 bricks. A new brick machine with a capacity of more than 50,000 bricks in 10 hours has been installed, together with a car system for carrying the bricks direct from the machines to tracks in drying-sheds and a new down-draft kiln of 400,000 capacity. It is also proposed to install machinery for making drain tile up to 12 inches.

MISSISSIPPI.

Columbia—Fertilizer Factory.—The Gulfport (Miss.) Oil, Fertilizer & Manufacturing Co., reported last week as having purchased site on which to locate fertilizer factory, will erect building 80x150 feet and power-house. About \$15,000 will be invested, and the plant will have a daily capacity of 400 tons.

Columbus—Furniture Company.—The City Furniture Co. has been incorporated with \$25,000 capital stock by C. R. Smith, J. W. Lee and others.

Corinth—Sewerage System.—City will receive bids until July 17 for about seven miles of 8-inch to 15-inch pipe sewers, for which Kirkpatrick & Johnson, Jackson, Miss., were previously reported as making surveys; T. E. Henry, mayor.

Grenada—Public Improvements.—City has voted affirmatively the proposed \$30,000 bond issue for extending sewerage system, improving water-works and electric-light plant and laying concrete pavements. Address The Mayor.

Greenville—Lath Factory.—E. J. O'Brien, representing the National Patent Lath Manufacturing Co. of St. Louis and Pine Bluff, Mo., is investigating with a view to locating lath factory at Greenville.

Greenville—Cotton Compress.—The Gulf Compress Co. of Memphis, Tenn., it is reported, has purchased the Planters' compress and will expend about \$10,000 in improvements.

Gulfport—Electric Power-house.—The Gulfport & Mississippi Traction Co., J. T. Jones, president, is completing arrangements for the erection of proposed electric power-house to cost \$200,000. It is proposed to install 750-horse-power turbines or turbo-generators with the latest type of feed-water heating condensers, water-tube boilers, etc.; appliances for preventing smoke will also be installed, stack to be built of special radial brick 150 feet high and 8 feet in diameter. Contracts have been let for all machinery; Stone Bros., 818 Common street, New Orleans, La., architects in charge.

Jackson—Real Estate.—Dr. R. V. Powers and associates have organized the Mississippi Realty Co., with \$30,000 capital stock.

Magnolia—Electric-light and Power Plant.—City has granted franchise to J. H. Price, C. V. Ratcliffe and L. E. Schilling to erect and operate an electric-light and power plant.

Meridian—Cotton Compress.—The Gulf Cotton Compress Co. is reported as to arrange at once for rebuilding on an enlarged scale its plant recently burned.

New Albany—Grocery Company.—Incorporated: New Albany Wholesale Grocery Co., with \$50,000 capital stock, by C. M. Moore, T. L. Grace and others.

Pass Christian—Laundry, etc.—Imperial Laundry & Manufacturing Co. has been incorporated with \$5000 capital stock by A. H. Robertson, J. E. Hanson and others.

Tupelo—Grocery Company.—B. T. Clark and others have incorporated the Clark Grocery Co. with \$25,000 capital stock.

MISSOURI.

Jackson—Water-works and Electric-light Plant.—City has voted the proposed \$27,000 bond issue for the construction of water-works and electric-light plant, for which Hiram Phillips, 615 Frisco Building, St. Louis, Mo., was previously reported as engineer in charge.

St. Louis—Car-wheel Works.—The St. Louis Car Wheel Co. has increased its capital stock from \$250,000 to \$750,000.

St. Louis—Sewer-pipe Works.—William L. Johnson Sewer Pipe Co. has been incorporated, with \$10,000 capital stock, by William L. Johnson, Wallace K. McDonald and A. M. Johnson, to manufacture sewer pipe.

St. Louis—Chemical Works.—Pheno-Lyptol Chemical Co. has been incorporated with \$10,000 capital stock by Carter M. Barry, James Bannerman and Robert Rutledge to manufacture antiseptics.

St. Louis—Tunnel.—The Illinois & Missouri Tunnel Co. has been organized with \$100,000 capital stock by Edward L. Thomas, George K. Thomas and John L. Taylor for building a tubular steel tunnel one mile long 50 feet below the bed of the Mississippi river, between St. Louis and East St. Louis.

St. Louis—Machinery Manufacturing.—St. Louis Pneumatic Renovator Co. has been incorporated with \$40,000 capital stock by Frank T. Snyder, A. E. Snyder, W. H. Ludwig, S. J. Walton and R. H. Dreyer to manufacture and deal in renovating and other machinery.

NORTH CAROLINA.

Balsam—Saw-mill.—It is reported that Boyce & Buchanan will establish saw-mill with a daily capacity of 35,000 feet.

Burlington—Hardware Company.—The Burlington Hardware Co., previously reported incorporated with \$5000 capital stock, has completed organization with R. E. L. Holt, president; W. M. King, vice-president, and C. T. Holt, secretary-treasurer.*

Charlotte—Cotton Gin.—The Elba Manufacturing Co. will erect cotton gin; outfit to consist of four 80-saw gins and the most improved Munger system of elevating, feeding and condensing machinery. Electricity will be used as motive power and an 85-horse-power electric motor will be installed. Contracts have all been let.

Charlotte—Gold Mining.—Max Jasspon of Alpena, Mich., vice-president of the Wolverine Gold Mining Co. of Rutherfordton, N. C., and associates, previously reported as having secured an option on gold mines near Charlotte belonging to Dr. Charles Alexander, will open the old shaft and sink a new one 125 feet deep, developing the resources to the full capacity, and, if satisfactory, the mine will be purchased, machinery and equipment installed for developing the vein extensively.

Craggy Mountain (P. O. Asheville)—Quarrying.—Incorporated: The Craggy Quarry Co., with an authorized capital stock of \$100,000, by R. S. Howland, W. F. Rogers, T. F. Davidson, S. P. Ravenel and associates of Asheville, N. C.

Goldsboro—Saw-mills, etc.—The A. T. Griffin Company has incorporated with \$30,000 capital stock and privilege of increasing to \$200,000 to operate saw-mills, etc.; incorporators, A. T. Griffin, C. Dewey, E. B. Borden, Joe Rosenthal and associates.

Greensboro—Street Improvements.—City has let contract to W. D. McAdoo, Jr., at 2 1/2 cents a yard for grading certain streets.

Greensboro—Cotton-ginning and Cleaning Machinery.—The American Cotton Co. has been incorporated with \$250,000 capital stock by Solomon N. Cone, Julius W. Cone, David Dreyfuss, Thomas Crabtree and Nell Ellington to build cotton-ginning and cleaning machinery.

Rocky Mount—Cotton Mill.—It is reported that the Rocky Mount Mills will enlarge its building to provide 7000 feet of additional floor space.

Shelby—Mattress Factory.—D. D. Wilkins contemplates establishing plant for the manufacture of felt and cheap mattresses.*

Spencer—Public Improvements.—City has voted the proposed \$75,000 bond issue for public improvements, including streets, water-works, sewerage, electric-light plant and schools; A. W. Hicks, clerk.

Statesville—Clothing Factory.—The Wallace-Hemphill Clothing Co. is the title of company reported last week to be organized by the Wallace Bros. Company of Statesville and J. T. Hemphill of North Wilkesboro, N. C., for the manufacture of men's and boys' clothing, trousers, etc.; capital stock \$30,000.

Statesville—Mercantile.—Lilly-Allison Company has been incorporated with \$25,000 capital stock by E. J. Lilly and others.

Waynesville—Lumber Plant.—The Laurel Fork Lumber Co., reported incorporated last week with \$50,000 capital stock, will erect band-saw mill 100x36 feet, with engine and boiler-house separate; daily capacity 35,000 feet. Later dry-kilns will be erected, and probably a small woodworking plant. H. V. Otto is president; George H. Manton, vice-president, and J. M. MacRae, secretary-treasurer and general manager.

Wilmington—Street Paving.—Roger Moore has contract at \$1.71 a square yard for laying about 10,000 square yards of vitrified-brick paving.*

Wilmington—Sewerage System.—Chartered: Brooklyn Sewerage Co., with \$25,000 capital stock, by John H. Rader and George A. Heyer, to construct a sewerage system.

Wilson—Vehicle Works.—The Hackney Wagon Works has increased its capital stock from \$50,000 to \$100,000.

Winston-Salem—Shoe Factory.—The Jenkins Bros. Shoe Co. has increased its capital stock to \$75,000. It is also stated that the company contemplates removing its factory from Elkin to Winston-Salem.

SOUTH CAROLINA.

Charleston—Timber Company.—The Midland Timber Co. has been organized with \$150,000 capital stock by R. L. Montague, A. T. Smythe and R. P. Tucker.

Charleston—Fertilizer Factory.—The Combahee Fertilizer Co., F. G. O'Neill, president, will hold a meeting July 31 to consider increasing capital stock from \$80,000 to \$100,000.

Charleston—Lead Works.—K. C. Stello and H. H. Ficken have incorporated the Charleston Lead Works with \$5000 capital stock.

Dunn—Furniture Factory.—It is reported that the South Dunn Manufacturing Co. will rebuild its plant, which was burned last year at a loss of \$50,000.

Florence—Lumber Company.—The Timmonsville Lumber Co. has completed organization with B. D. Dargan, president; F. L. Wilcox, treasurer, and W. R. Barringer, secretary; capital stock \$40,000.

Greenville—Agricultural Implements.—The Markley Hardware & Manufacturing Co. has been organized with Walter West, president; H. C. Markley, vice-president, and James Birnie, secretary-treasurer, to take over and consolidate the business of the Greenville Coach Co. and Walter West. Two buildings, 50x130 and 40x100, respectively, will be erected. About \$75,000 will be invested; J. E. Sirrine, Greenville, S. C., architect.

Marion—Mercantile.—Chartered: Gasque Brothers, with \$10,000 capital stock.

Rock Hill—Telephone System.—J. H. Milling of Rock Hill, W. S. Percival of Oden and associates are organizing company to construct and operate telephone system from Rock Hill to Oden.

Rock Hill—Water-works Improvement.—Rock Hill Water, Light & Power Co. will drill an 8-inch or 10-inch well for increasing water supply (reported last week). Electric power will be used to lift water from the well. S. T. Frew is superintendent.*

Spartanburg—Woodworking Plant.—It is reported that Taber & Lawton have purchased the woodworking plant of the Morgan Wood & Iron Works Co., which will be improved and operated on an extensive scale.

TENNESSEE.

Brownsville—Cotton Compress.—Chartered: The Haywood County Compress Co., with \$50,000 capital stock, by George W. Lyle, W. J. Lea, J. O. Bonner, R. N. Bond and James Tipton, to operate a cotton compress.

Chattanooga—Water-power-Electric Plant.—Col. John Bogart, 16 Exchange Place, New York, has been engaged as consulting engineer for the Chattanooga & Tennessee River Power Co., which proposes building a water-power-electric plant on the Tennessee river below Chattanooga. This development is to produce about 50,000 horsepower for transmission by electricity to Chattanooga, the power plant to be 12 miles from the city in a direct line. The lock will be over 60 feet wide, the dam 40 feet high and 1200 feet long; power-house to be adequate for 14 units of 3000 kilowatts each. Transformer-house and other buildings will be erected. No machinery contracts have been awarded. The water-wheels will be of the vertical type attached to vertical generators of the alternating-current type, three phase, sixty cycles. Each machine will be capable of 3000 kilowatts continuous load, and there will be 14 installed. No time has been set for letting contracts, but it will be in the immediate future. Various other details regarding this enterprise were given recently by the Manufacturers' Record.

Clarksville—Skirt Factory.—The B. A. James Manufacturing Co., previously reported as having purchased site on which to erect building for skirt factory, is having plans prepared by Coulter Bros. for a three-story structure 44x105 feet, to cost \$12,000.

Cornersville—Milling Company.—James Gosnell, J. B. Roberson, A. F. Meadows, A. S. Beatty and L. P. Cooper have incorporated the Cornersville Milling Co. with \$5000 capital stock.

Elizabethton—Lumber Company.—The Bradley Lumber Co. has been incorporated with \$250,000 capital stock by E. E. Bradley, Nathan Bradley, J. W. Fletcher and associates.

Gleason—Hoop Factory.—J. G. Trevathan is reported as erecting a hoop factory.

Johnson City—Slate Quarrying.—It is reported that T. A. Gillespie has secured an option on a tract of land belonging to John Ford, located in Cash Hollow, four miles from Johnson City, containing slate deposits, and will arrange at once for its development.

Knoxville—Box Factory.—The Holston Box & Lumber Co., reported last week as organized with \$25,000 capital stock to manufacture boxes, has purchased the property of Saxton & Co., which will be equipped at once with machinery for beginning operations. All machinery has been purchased.

Knoxville—Street Paving.—City is completing arrangements for paving with vitrified brick Asylum avenue and Walnut street, and bids for the work are now being invited by Recorder C. C. Nelson; T. J. Morehead, city engineer.

Memphis—Woodworking Plant.—The G. H. Lesh Manufacturing Co. of Warsaw, Ind., previously reported as to establish plant at Memphis, will erect building 180x40 feet which will be equipped for the manufacture of plow handles, beams and rungs, wagon woodwork, etc. Engine-room, boiler-room, storage buildings, etc., will also be built. About \$50,000 will be invested. John N. Runyan is president; P. O. address Station G, Memphis.*

Memphis—Saw-mill.—Murdoch Lumber Co. has purchased site in South Memphis on which to erect hardwood band-saw mill.

Memphis—Hardwood Flooring.—L. P. Arthur, E. E. Goodlander, Levi Joy, H. B. Anderson and T. B. Allen have incorporated the Arthur Hardwood Flooring Co. with \$50,000 capital stock to erect plant for the manufacture of hardwood flooring.

Memphis—Flour Mill.—It is reported that the Cairo (Ill.) Milling Co. has purchased site on which to erect flour mill to be equipped for a daily capacity of 500 barrels.

Memphis—Wooden-pail Factory.—The Columbia Package Co., previously reported to be incorporated with \$25,000 capital stock to manufacture wooden pails, has let contract for the erection of buildings. The main building will be two stories, of frame, 64x70 feet; boiler-house to be of brick, 34x18 feet; cost \$5000. R. N. Erlon is architect.

Memphis—Commission Company.—Chartered: W. G. Ide Company, with \$15,000 capital stock, by W. G. Ide, M. D. Dix, I. D. Corbin, J. G. Sanders and Jesse Foltz, to deal in fruits and produce.

Memphis—Stoves, Ranges, etc.—A. D. Langstaff, W. R. Barksdale, Robert Lockwood, Dorsey H. White and D. C. Huntington have applied for a charter for the Langstaff Company, with \$10,000 capital stock, to deal in stoves, ranges, cooking utensils, etc.

Nashville—Fertilizer Factory.—It is reported that Armour & Co. of Chicago, Ill., have purchased site on which to erect fertilizer factory.

Nashville—Brick Plant.—R. W. Beale, Per-year, Tenn., reported last week as contemplating the establishment of fire-brick plant, will organize company with \$75,000 capital stock to operate same.

New River—Saw-mill.—The New River Lumber Co., it is reported, contemplates installing an additional double band-saw mill.

Rockwood—Water-mining Car.—W. J. Richard and George E. Gylvester, it is reported, have purchased the Haley Machine Shops, which will be equipped to manufacture a water-mining car.

Rockwood—Knitting Mill.—The proposed company referred to last week will have a capital stock of \$40,000. It will be incorporated by W. E. McElwee, Rockwood; Garrett Andrews, Jr., of Chattanooga and others.

Shelbyville—Water-works and Electric-light Plant.—City will vote August 3 to decide the municipal ownership of water-works and electric-light plant. If the proposition carries it is proposed to issue \$40,000 of bonds. Address The Mayor.

TEXAS.

Atascosa County—Farming Lands, etc.—A St. Louis syndicate has purchased from Hunt, Gohlke & Co. of San Antonio, Texas, 4563 acres of ranch property in Atascosa county and have organized the Natasosca Land & Orchard Co., with W. F. Gohlke of San Antonio, Texas, secretary, to develop the tract. It is proposed to divide 3500 acres of it into small farms which will be irrigated and leased to farmers, and the balance to be used in producing alfalfa and other forage crops for feeding the live-stock raised. A number of test wells for furnishing the water supply are now being sunk.

Beaumont—Laundry.—The Ineeda Laundry Co. is erecting two-story brick building 60x150 feet, to cost about \$20,000.*

Big Spring—Railroad Repair Shops, Roundhouse, etc.—It is reported that the Texas & Pacific Railway is making arrangements for the erection of roundhouse and shops at a cost of \$150,000. B. S. Wathen, Dallas, Texas, is chief engineer.

Bonham—Gas, Electric-light and Power Plant.—J. F. Strickland, O. Goodwin, M. E. Templeton, J. D. Caldwell and T. H. Stephenson have incorporated the Bonham Gas & Electric Co. with \$100,000 capital stock to operate gas, electric-light and power plants. The company has purchased the plant of the Bonham Electric Light & Power Co. and has secured a 50-year franchise for its operation.

Dallas—Publishing.—The Lantern Company has been incorporated with \$25,000 capital stock by George A. Carden, E. G. Senter and D. Frank Carden to conduct a printing and publishing business.

Dallas—Planing Mill.—Lumbermen's Planing Mill Co. has incorporated with \$10,000 capital stock to operate a planing mill; incorporators, Joseph M. Dixon, J. C. Roberts, O. O. Bucklew, R. P. Darnell and John T. Jones.

Dallas—Floriculture Plant.—E. H. R. Green, it is reported, has purchased 21 acres of land near Dallas on which to establish a floriculture plant. It is proposed to install a system of irrigation, build 20 hot-houses, etc. About \$250,000 will be invested. A 7000 residence will also be erected.

Del Rio—Steam Laundry.—Incorporated: Del Rio Steam Laundry Co., with \$15,000 capital stock, by J. G. Griner, R. C. Mayer and E. F. Howard, to operate a steam laundry.

Dublin—Mercantile.—A. M. Maloney and associates have incorporated the Maloney Mercantile Co. with \$50,000 capital stock.

Frankston—Oil Wells.—W. P. Boyd, E. M. Jones, J. M. Cook of Frankston, D. R. Murchison, B. M. Roberts of Athens, Texas, and associates have incorporated the Caddo Oil Co. with \$20,000 capital stock to drill for oil.

Houston—Box Factory, Saw and Planing Mill.—The Rice-Allen-Waples Lumber Co. has purchased the Harrisburg plant of the Houston Box Factory, consisting of box factory, saw and planing mill, and has organized the Harrisburg Lumber Co. with \$20,000 capital stock to operate the plant. It is proposed to enlarge same, increasing the capacity of the mill from 20,000 to 40,000 feet daily. R. H. Williams will be superintendent.

Houston—Real Estate.—Home Site Town Lot Co. has been incorporated with \$10,000 capital stock by H. E. Fuller, E. L. Dennis, F. B. King and associates.

Houston—Cotton Factors, etc.—Incorporated: William D. Cleveland & Sons, with \$200,000 capital stock, by William D. Cleveland, A. S. Cleveland and William D. Cleveland, Jr.

Houston—Oil Wells.—The Mound Oil Co. has incorporated with \$300,000 capital stock to drill for oil; incorporators, James Bute, Edwin B. Parker, Jesse Andrews, W. H. Kimbrough, Craig Bell of Houston, Thomas A. Wenvine of East Orange, N. J., and Percy M. Furler of New York, N. Y.

Houston—Oil Wells.—Walter B. Sharp, H. R. Hughes and F. L. Wimmer have incorporated the Northwest Oil Co. with \$25,000 capital stock to drill for oil.

Houston—Iron Works.—The Batson Iron Works has been incorporated with \$75,000 capital stock and Ben J. Harper of Houston, president; George L. Woodard of Beaumont, Texas, vice-president; R. W. Jeffrey of Beaumont, Texas, secretary, and James P. Finegan of Houston, treasurer and general manager, to operate foundries and iron works. The plant of the Smith-Wallis Iron Works has been purchased and will be enlarged and operated. The company will continue operating its plants at Humble and Batson.

Karnes—Cotton Gin.—The Famous Gin Co. has been incorporated with \$7000 capital stock by C. D. Janer, William Winerich, S. A. Hickok and others to operate a cotton gin.

Llano—Water-power-Electrical Plant.—John W. Maxey, C. E. Houston, Texas, representing Eastern capitalists, is investigating the water-power at Llano for the erection of an electric-power plant. If the project is favorably reported on it is proposed to construct a granite dam for the development of the water-power, which will be transmitted by electricity to nearby towns for industrial purposes.

Longview—Water-works.—City has let contract to the McWhorter Plumbing & Machine Co. of Hillsboro, Texas, at \$25,000 for the construction of water-works for which W. P. Bullock was previously reported as preparing plans.

Mexia—Chemical Works.—Figaro Chemical Co. has been incorporated with \$30,000 capital

stock by J. O. Wickoff, John C. Karner and T. E. Smith.

Palestine—Furniture Factory.—It is reported that W. W. Wainwright, proprietor of the Palestine Novelty Co., contemplates organizing company for the establishment of furniture factory.

Paris—Oil Wells.—W. H. Greenhaw, W. B. Howard, Will Baldwin, J. W. Hardison, J. T. Conway, O. P. Erwin and Clement Few have incorporated the Paris Oil Co. with \$5000 capital stock to drill for oil.

Pilot Point—Flour Mill.—J. C. Thomas, Henry Sely and J. P. Cooper have incorporated the Pilot Point Roller Mill Co. with \$50,000 capital stock to operate a flour mill.

Rockland—Saw-mill.—It is reported that the Vaughan Lumber Co., Beaumont, Texas, will establish saw-mill near Rockland.

San Antonio—Real Estate.—Continental Land & Investment Co. has been incorporated with \$25,000 capital stock by Otto Wahrmond, S. G. Newton, Otto Kochler and associates.

Temple—Sewerage System.—The Temple Sanitary Sewer Co. has been incorporated with \$30,000 capital stock by P. L. Downs, F. L. Denison and L. S. Williamson to install sewerage system. Messrs. Denison, Downs and associates were reported last week as having secured franchise to construct and operate sewerage system.

Westfield—Oil Wells.—P. M. Granberry, H. T. Stalti and E. L. Porch have organized as Granberry, Stalti & Porch for the development of 18 acres of oil land at Westfield; main office, Blinz Building, Houston, Texas.

VIRGINIA.

Alexandria—Chemical Works.—The Alexandria Fertilizer & Chemical Co. has closed contract with J. E. Brennerman, 1523 South Front street, Philadelphia, Pa., for building addition 50x50 feet to acid chamber; cost \$10,000.

Danville—Tobacco Factory.—The Tobacco-Growers' Interstate Protective Association will organize the Co-operative Manufacturing Co. with \$100,000 capital stock to operate tobacco factory. H. C. Allen has been appointed chairman of committee.

Danville—Corduroy Trouser and Overall Factory.—It is rumored that the Morotock Manufacturing Co., manufacturer of corduroy trousers and overalls, will shortly increase facilities.

Harrisville—Printing Plant.—The Gazette Printing Co. has been incorporated with \$5000 capital stock by J. Willis Fidler, J. H. Lininger, W. R. Heaton, P. G. Brake and others to operate printing plant.

Kindrick—Iron Mines.—It is reported that A. T. Short of Marion, Va., has leased iron property near Kendrick from A. A. Campbell and J. D. Perkins, and will arrange at once for its development.

Martinsville—Water-power-Electrical Plant.—The city is progressing with its development work on the Smith river, which consists of a stone dam 15 feet high, which will develop 35 net horse-power under a head of 20 feet, the water to be conveyed to wheels through an open canal and transmitted by electricity two miles distant to Martinsville for light and power purposes. The power-house will be located about 800 feet below the dam and will be equipped with two S. Morgan Smith horizontal turbines of 225 horse-power each. About \$75,000 will be invested. J. R. Gregory, city engineer, is supervising the construction. This enterprise was previously referred to in these columns.

Norfolk—Commission Company.—Chartered: R. M. Wilkinson Company, with an authorized capital stock of \$15,000; R. M. Wilkinson, president; G. F. Wilkinson, secretary.

Norfolk—Real Estate Development.—Thos. H. Wilcox and Barton Myers, it is reported, have purchased 12 acres of land at \$25,000 to be developed into an extension of Ghent.

Norfolk—Ice Factory.—It is reported that Feuerstein & Co. will erect a 50-ton ice plant.

Norfolk—Novelty Company.—Incorporated: The Norfolk Novelty Corporation, with an authorized capital stock of \$5000, to deal in novelties. J. H. Cofer is president; R. W. Whitehurst, vice-president, and A. B. Carney, secretary-treasurer.

Norfolk—Ship Loading and Unloading.—Incorporated: Mechanical Loading & Trimming Corporation, with an authorized capital stock of \$200,000, to operate mechanical devices for loading and unloading steamers, ships, barges, etc. W. H. Lumsden of Norfolk is president; J. K. Waterman of Minneapolis, Minn., vice-president, and C. G. Kizer of Norfolk, secretary.

Parsons—Drug Company.—J. W. Kogelschats Drug Co. has been incorporated with \$10,000 capital stock by J. W. Kogelschats, L. D. Carrick, S. O. Billings and others.

Radford—Flour Mill.—Radford Milling Co., reported incorporated last month to operate flour mill, will erect building 30x35 feet, to be equipped for a capacity of 50 barrels.

Roanoke—Brick Works.—It is reported that the Adams Bros. & Paynes Company, proprietor of the Roanoke Brick Works, will install additional machinery for doubling its present capacity.

Salem—Well Drilling.—The town is arranging for the sinking of a 10-inch deep well and will receive bids for same. Address W. B. Dillard, chairman water committee.*

WEST VIRGINIA.

Charleston—Coal and Land Company.—Philip Frankenger, C. F. Sterrett, C. B. Couch, W. R. L. Sterrett and Julius A. DeGruyter have incorporated the Wolf Creek Coal & Land Co. with \$75,000 capital stock to deal in coal, timber and mineral land.

Charleston—Oil and Gas Wells.—Kanawha Valley Oil & Gas Co. has been incorporated with \$75,000 capital stock by J. A. Holley, Samuel Stephenson, Ira P. Champe, W. E. R. Byrne and associates to drill for oil and gas.

Charleston—Rail Brakes, etc.—Friction Rail Brake Co. has been incorporated with \$50,000 capital stock by J. W. Dawson, H. L. Pritchard of Charleston, B. V. Gilmore of Middleport, Ohio; James E. Staton of Eskdale, W. Va., and S. E. Leach of Red House, W. Va., to manufacture patent friction rail brakes and improvements on same.

Charleston—Real Estate.—Incorporated: The Kanawha Realty & Manufacturing Co., with \$50,000 capital stock, by D. E. Lloyd, William Jones, John Davidson and J. W. Dawson.

Clarksburg—Construction Company.—Mountain State Construction Co. has incorporated with \$50,000 capital stock to construct trestles, bridges, tunnels, etc.; incorporators, Carl S. Horner, H. Maxwell, J. N. Bishop and F. A. Bishop.

Fairmont—Mercantile.—The Hurricane Mercantile Co. has been incorporated with \$5,000 capital stock by Dr. E. M. Cox and associates.

Glen Jean—Beverage Factory.—G. L. Hooper, W. P. Hooper, S. L. Hooper of Glen Jean, J. L. Blizzard and M. F. Blizzard of Clifton Forge, Va., have incorporated the Allegheay Bottling Co. to manufacture non-alcoholic beverages.

Kingwood—Coal Mines and Coke Ovens.—The West Virginia Coal Co. of Morgantown, W. Va., is reported as to install a modern coal-mining plant and build several hundred coke ovens.

Morgantown—Tinplate Plant.—The sale of the plant of the Morgantown Tinplate Co. to George C. Sturgiss of Morgantown at \$200,000, reported in April, has been confirmed. It is stated that Mr. Sturgiss will transfer the property to the American Sheet & Tinplate Co. of Pittsburgh, Pa., and about \$400,000 will be expended in improvements to plant to put it in full operation.

Newells (P. O. Congo)—Water-works and Electric-light Plant.—The Newells Water & Power Co. has incorporated with \$10,000 capital stock to operate water-works and electric-light plant; incorporators, E. M. Knowles, W. Wells, H. N. Harker, J. G. Lee and Walter B. Hill, all of East Liverpool, Ohio.

Preston County—Coal Mines.—It is reported that Stephen B. Elkins of Elkins, W. Va., has secured an option on 3000 acres of coal land in Preston county with a view of thoroughly developing the property.

Wheeling—Plano Factory.—It is reported that a plano factory will be established, and Bruno Hoehl is interested.

Wyoming County—Coal Mining.—James A. Hughes of Huntington, W. Va., it is reported, has purchased 1700 acres of coal land in Wyoming county and will arrange for its development.

INDIAN TERRITORY.

Pocahontas—Coal Mining.—The Indian Coal & Mining Co., reported last week under Dow, I. T., as having begun mining operations, will mine bituminous coal, and the plant will have a capacity, when developments are completed, of 500 tons daily. About \$50,000 will be invested.

Tulsa—Lime Company.—The Tulsa Lime Co. of Tulsa and Chandler, O. T., has been incorporated with \$25,000 capital stock by M. Stewart Jim Mangan of Tulsa, J. L. Wolfe and G. A. Seaman of Chandler, O. T.

Wagoner—Sewerage System and Street Paving.—City contemplates issuing bonds for the installation of storm and sanitary sewers, and is also considering the laying of about 2000 feet of brick pavement; C. G. Waits, mayor, and H. H. Hellen, city engineer.

Wynnewood—Cottonseed-oil Mill.—The

Wynnewood Cotton Oil Manufacturing Co., it is reported, is making improvements to plant at a cost of \$5000.

OKLAHOMA TERRITORY.

Altus—Steam Laundry, etc.—The Edgars Laundry & Towel Supply Co. has been incorporated with \$2500 capital stock by G. B. Edgar, Claud M. Miller and Mike LeMaster.

Anadarko—Oil and Gas Wells.—Incorporated: The Producers' Oil & Gas Co., with \$100,000 capital stock, by C. M. Bryan, John E. Golden, A. Brummett and Grace Mount to drill for oil and gas.

Binger—Cotton Gin, etc.—The Binger Gin & Grain Co. has been incorporated with \$10,000 capital stock by A. H. Bales, F. M. Pulkerson, R. L. Winchell and E. C. McWilliams.

Chandler—Ice and Cold-storage Plant.—Reports state that J. F. Cornish and A. C. Duevers will erect an ice and cold-storage plant.

Cherokee—Telephone System.—The Cherokee Rural Telephone Co. has secured franchise to construct and operate telephone system.

Corbett—Telephone System.—J. P. Corbett, William Montan, Lee Ballew, P. A. Holmes and associates have incorporated the Citizens' Telephone Co. with \$10,000 capital stock.

Enid—Real Estate.—The Choctaw Land Co. of Enid, Kansas City and St. Louis, Mo., has been incorporated with \$50,000 capital stock by E. W. Bindschadler of Enid, David Lowen and Oscar Miller of St. Louis, Mo.

Erick—Cotton Gin, etc.—Incorporated: The Erick Gin, Fuel & Trading Co., with \$25,000 capital stock, by J. P. Wilmoth, C. P. Norman, R. L. Vining, W. L. Taylor, J. Wiley Smith, C. M. Sutton and associates, to operate cotton gin, etc.

Granite—Mining.—The Eggleston Industrial Co. of Granite, Oklahoma City, Fort Worth, Texas; Kansas City, Mo., and New York, N. Y., has incorporated with \$1,000,000 capital stock to develop mining lands; incorporators, Thomas L. Eggleston, Sr., Thomas L. Eggleston, Jr., and J. R. Gooch, all of Granite.

Guthrie—Coal Company.—Incorporators: The Kimball Coal Co., with \$5000 capital stock, by L. E. Kimball and associates.

Hobart—Printing Plant.—The Chief Printing Co. has been incorporated with \$5000 capital stock by Charles Sherburne, Tom V. Ellsey, J. J. Stevenson and H. L. Standeven.

Indianapolis—Oil and Mining Company.—The Indianapolis Oil & Mining Co. has been incorporated with \$80,000 capital stock by B. B. Newcom, R. A. Soderberg of Indianapolis, M. Langston, Jr., A. L. Peacher and Joe Dinwiddle of Fort Smith, Ark.

Oklahoma City—Manufacturing.—Lee Van Winkle, Albert A. James and F. S. Rhodes have incorporated the James Manufacturing Co. with \$10,000 capital stock.

Oklahoma City—Water-works and Sewerage Improvements.—City contemplates issuing \$375,000 of bonds for improving water-works and extending sewerage system. Address Mayor Messenbaugh.

Oklahoma City—China and Glass Company.—The Myser China & Glass Co. has been incorporated with \$10,000 capital stock by L. J. Myser, Henry Elliott and F. E. Williams.

Oklahoma City—Canal Construction.—The Standard Power & Construction Co. of Oklahoma City and Weleetka, I. T., has incorporated with \$50,000 capital stock to construct a canal from the South Canadian river to Weleetka; incorporators, Charles DeWattville, W. A. Pollock of Oklahoma City, B. O. Sims, C. H. Canewen and Luke Moore of Weleetka, I. T.

Shawnee—Sewerage System.—City will vote on the issuance of \$50,000 of bonds for the construction of sewerage system. Address The Mayor.

BURNED.

Beaumont, Texas.—Apartment-house owned by C. T. Helsig; loss \$20,000.

Birmingham, Ala.—Birmingham Paper Co.'s plant, loss \$30,000; building owned by Major Hardie, loss \$30,000. Collins & Co., loss \$80,000; building owned by Major Spence, Tuscaloosa, Ala., loss \$30,000.

Dawson, Ky.—Southern Hotel; loss \$3000.

Jefferson, Texas.—Jefferson Ice, Light & Power Co.'s plant.

Nashville, Tenn.—Louisville & Nashville Railroad Co.'s roundhouse; loss \$50,000. W. H. Courtenay, Louisville, Ky., is chief engineer.

Nashville, Tenn.—Phillips, Webb & Co.'s building, owned by M. B. Pilcher.

Owensboro, Ky.—Owensboro Wagon Co.'s

blacksmith and paint shop and a portion of main building; loss \$50,000.

Plano, Texas.—Hughston Bros.' corn-shelling plant; loss \$4000.

Ripley, Tenn.—Miller & Partee's store building.

Roanoke, Va.—The Press Building, owned by B. H. Angell and occupied by the Roanoke Carriage Co., Camper & Winfree, printers, and the Virginia Daily Press; loss \$20,000.

Smithfield, N. C.—The Brooklyn Manufacturing Co.'s plant.

Snow Hill, Md.—Selby & Shockley's flour mill, loss \$9000; building owned by Wm. H. Jones.

Talladega, Ala.—Shops at the State Deaf and Dumb Institute, J. Hal Johnson, president; loss \$30,000.

West Lake, Fla.—West Bros.' dry-kilns.

BUILDING NOTES.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Asheville, N. C.—Office Building.—J. E. Joyner has contract to erect \$7000 brick office building for W. T. Weaver after plans by W. H. Lord.

Barton Heights, Va.—School Building.—The Henrico County School Board has engaged A. S. Hunt, Richmond, Va., to prepare plans and specifications for proposed \$10,000 school building.

Baton Rouge, La.—Building.—Chartered: The Woodmen Realty Co., with \$25,000 capital stock, to purchase site and erect building. F. L. Rosenthal is president; R. A. Hart, vice-president; John Amiss, secretary, and Oscar Kondart, treasurer.

Benton, Tenn.—Jail Building.—Polk county contemplates erecting jail building. Charles E. Johnson is chairman building committee.

Bessemer, Ala.—Substation, Depot and Office Building.—The Birmingham (Ala.) Railway, Light & Power Co. will erect a substation, freight depot and offices, replacing present plant, but will not erect power-house, as reported last month.

Bessemer, Ala.—Church.—First Presbyterian congregation contemplates the erection of edifice to cost about \$15,000. R. C. Gilmore is pastor.

Bonanza, Ark.—Bank Building.—A new bank, organized with L. C. Smith, president, is arranging for the erection of bank building.

Burlington, Ky.—Bank Building.—National Architectural & Engineering Co., Groton Building, Cincinnati, Ohio, has prepared plans for a two-story building 25x50 feet of press brick, concrete, tile and marble work for the People's Bank. For further information address D. E. Castleman.

Charleston, S. C.—Depot.—It is reported that the Southern Railway is having plans prepared for a freight depot 30x400 feet; C. H. Ackert, Washington, D. C., general manager.

Charlotte, N. C.—Dwelling.—W. C. Maxwell has had plans prepared by L. L. Hunter for the erection of proposed residence.

Chattanooga, Tenn.—Lodge Building.—The local lodges of Odd Fellows have organized the Chattanooga Odd Fellows Temple Company for the erection of proposed \$25,000 building.

Chickasha, I. T.—Depot.—It is reported that the Chicago, Rock Island & Pacific Railway will erect depot and make other improvements, expending about \$65,000. W. L. Darling, Chicago, Ill., is chief engineer.

Cleveland, Miss.—School Building.—City is having plans prepared by Spencer & Temple, Champaign, Ill., for a brick and stone school building to be erected at a cost of \$20,000.

Corpus Christi, Texas.—Hotel.—W. H. Fitch has purchased site on which to erect hotel.

Covington, Ky.—Warehouse.—Kenton Supply Co. has had plans prepared by Schofield & Walker for the erection of proposed two-story warehouse 55x105 feet of concrete and steel construction.

Cumberland, Md.—Dwelling.—William C. Devecmon has purchased site on which to erect a \$35,000 residence.

Cumberland, Md.—Hosehouse.—Wm. A. Cornwell, Will H. Shepherd and James C. Powell, fire department committee, will receive bids until July 20 for tearing down and rebuilding of Pioneer Hosehouse and the building of a new hosehouse in South Cumberland. Plans and specifications can be obtained by applying to Sansbury & Sansbury, architects, and depositing \$5. Usual rights reserved.

Dallas, Texas.—Bank Building.—American

Exchange National Bank, Royal A. Ferris, president, is having plans prepared for remodeling the building previously occupied by the American National Bank.

Dallas, Texas.—Cathedral.—S. P. Cochran will receive competitive plans from architects until August 10 for Scottish Rite Cathedral, previously reported to be erected at a cost of approximately \$100,000. The committee will pay the successful architect 5 per cent. of the estimated cost for plans and supervision. Three prizes are offered—first prize \$200, second prize \$125 and third prize \$75.

Dallas, Texas.—Flat Building.—Judge W. N. Atkinson of Waco, Texas, has purchased site on which to erect a three-story brick flat building.

Dawson, Ga.—City Hall.—S. N. Adams, Tifton, Ga., has contract at \$9550 for the erection of city hall, previously reported.

DeQueen, Ark.—School Building.—J. G. Hillis, Texarkana, Ark., has contract at \$12,250 for the erection of proposed two-story school building after plans by Sidney Stewart, Texarkana, Ark.

Ensley, Ala.—Store Building.—D. W. Morris & Bros. have let contract to Thomas Culpepper for the erection of brick and stone building with plate-glass front.

El Paso, Texas.—Dwelling.—James E. Bowen has let contract to S. E. Patton for the erection of brick and stone residence previously reported; hot-water heating plant, gas and electric lights will be installed; cost \$9000.

El Paso, Texas.—Office Building.—Phelps, Dodge & Co. has had plans prepared for the erection of an office building to cost about \$200,000; general office, New York, N. Y.

El Paso, Texas.—Business Building.—Henry Pfaff has let contract for the erection of a two-story brick building 40x120 feet.

El Paso, Texas.—Building.—W. F. Layer will erect three-story building.

Fairmont, W. Va.—Masonic Temple.—Baldwin & Pennington, 311 North Charles street, Baltimore, Md., have been engaged to prepare plans for proposed Masonic Temple to be erected at a cost of about \$100,000.

Fort Gibson, I. T.—Bank and Office Building.—A. Klingensmith, 523 Garrison avenue, Fort Smith, Ark., has prepared plans and will receive bids for a two-story bank and office building to be erected by F. H. Nash.

Fort Smith, Ark.—Office Building.—Fort Smith Light & Traction Co. has had plans prepared by A. Klingensmith, 523 Garrison avenue, for remodeling office building, for which bids are being received.

Fort Worth, Texas.—Hospital.—Mrs. M. D. Biggs, Mrs. M. J. Bevans, Mrs. E. M. Ellis, Mrs. O. F. Davis and associates have organized the All Saints' Hospital Co., to erect and maintain a hospital.

Fort Worth, Texas.—Dwelling.—Dr. W. A. Durlinger has let contract for the erection of proposed \$20,000 residence.

Frankfort, Ky.—Capitol Building.—Sealed proposals marked "Proposals for Kentucky State Capitol Building" and addressed to Henry B. Ware, secretary Board Capitol Commissioners, Frankfort, will be received until August 1 for the construction of the various portions and of the whole of the State Capitol building in accordance with the drawings and specifications by F. M. Andrew, architect, Conover Building, Dayton, Ohio, who will furnish all necessary information, plans and specifications on written application. Usual rights reserved.

Frederick, Md.—Clubhouse.—Local lodge of Elks has let contract to Lloyd C. Culler for the erection of two-story brick clubhouse.

Galena, Md.—Bank Building.—The Farmers' Trust, Banking & Deposit Co., 211 North Liberty street, Baltimore, Md., has awarded contract to C. A. R. Eason, 319 North Charles street, Baltimore, Md., for the construction of bank building; to be one story, 30x40 feet, of reinforced concrete construction, metal frames and sashes and skylights glazed with wireglass, ornamental iron, slag roof, electric wiring and fixtures, sanitary plumbing, heating system.*

Greensboro, N. C.—Flat Building.—T. J. Copeland has let contract to Ernest Simms for the erection of proposed flat building.

Gretna, La.—Courthouse.—The Jefferson Police Jury have adopted plans by W. S. Hull, Jackson, Miss., for proposed three-story pressed-brick and marble courthouse 65x105 feet; cost \$60,000.

Hancock, Md.—Bank Building.—The First National Bank has purchased site on which to erect bank building.

Houston, Texas.—Hotel.—W. H. Hammond & Co. are preparing plans for a 12-story hotel 150x190 feet, of fireproof construction, to be erected at a cost of \$1,000,000.

Houston, Texas.—Hotel Improvements.—Sanguinet & Staats, First National Bank

Building, Houston, Texas, will receive bids until July 15 for the erection of a four-story addition to the Brazos Hotel. Plans and specifications can be seen at the architects' offices, Houston, Fort Worth and Dallas, Texas.

Hot Springs, Ark.—Business Building.—Hamp Williams will erect a three-story brick building 100 feet square.

Jackson, Miss.—Store Building.—The Jones-Kenning Company has let contract to McGee & Garber for the erection of proposed store building; structure to be six stories, 80x102 feet, and cost \$60,000.

Jefferson City, Mo.—Building.—Board of Commissioners of the Supreme Court Building, W. C. Marshall, chairman, will receive bids until July 31 for the construction of Supreme Court building according to plans and specifications on file and to be seen at the office of Mariner & La Beaume, architects, Chemical Building, St. Louis, Mo. The form of bid and deposit required are provided for in the contract and specifications on file at the architects' office. Usual rights reserved.

Jellico, Tenn.—Church.—Christian congregation is having plans prepared for the erection of proposed \$8000 edifice. Address The Pastor.

Johnson City, Tenn.—Church.—St. John's Episcopal Church is having plans prepared by Bearden & Foreman, Chattanooga, Tenn., for the erection of a \$12,000 edifice.

Johnson City, Tenn.—Bank Building.—The City National Bank has had plans prepared by Bearden & Foreman, Chattanooga, Tenn., for the erection of proposed \$6000 edifice.

Johnson City, Tenn.—School Building.—City will vote August 2 on the issuance of \$35,000 of bonds for the erection of school building. Address The Mayor.

Kansas City, Mo.—Store and Office Building.—Ely Meyer and M. C. Simon Clothing Co. of Rochester, N. Y., have secured site and are having plans prepared for a seven-story marble and steel building.

Keyser, W. Va.—Church.—Catholic Church of the Assumption is having plans prepared for the erection of edifice to cost \$10,000. Father O'Hara is pastor.

Knoxville, Tenn.—Apartment-house.—L. C. Waters has prepared plans for two-story frame apartment-house for T. R. and A. J. Price, to be equipped with hot-water-heating apparatus, gas and electric lights.

Lake Charles, La.—Lodge Building.—Lake Charles Lodge No. 165, A. F. and A. M., has purchased site on which to erect proposed three-story Masonic Temple 50x100 feet, at a cost of \$25,000.

Lake Charles, La.—Business Building.—A. H. Humphrey, Von Pheel and Gordon Building, has prepared plans and will receive bids for the erection of a two-story business building 50x100 feet, of enameled brick and terra-cotta, iron and steel work, for H. Levy; to have sanitary concrete flooring, pitch and gravel roofing, tiling, hard plaster, electric lights, dumbwaiter, etc., and cost \$12,000.

Lake Village, Ark.—Courthouse.—Albert G. Simms has contract at \$32,400 for the erection of Chicot county's proposed courthouse.

Lancaster, Texas.—Dwelling.—B. F. Baker has contract to erect two-story frame residence for Mrs. L. F. White after plans by Sanguinet & Staats, Dallas, Texas; building to be of ordinary construction, equipped with hot-water heating plant, gas and electric lights, dumbwaiter, and cost \$20,000.

Leslie, S. C.—Church.—The Associate Reformed congregation is arranging for the erection of edifice. Address Rev. Oliver Johnson.

Lexington, Ky.—Hospital.—J. P. Shaw, chairman building committee, Second National Bank Building, Lexington, will receive bids until July 26 for the erection of building for the Good Samaritan Hospital in accordance with plans and specifications prepared by Anderson & Faig, and which are on exhibition at the Mechanical Hall State College grounds. Bids will be received for the work as a whole or in part. Usual rights reserved.

Live Oak, Fla.—Hotel Improvements.—C. H. Brown and J. B. Barton have purchased the Ethel Hotel and will expend about \$30,000 in enlargements and improvements.

Livingston, Texas.—Business Building.—Bids will be received until July 20 for the erection of a two-story brick business building. Terms can be seen at Gerlach Bros.' store and at the office of L. H. Green, architect, Commercial Bank Building, Houston, Texas.

Livingston, Texas.—Office Building.—Bids will be received until July 20 for the erection of a two-story fireproof office and record building 21x44 feet. Terms can be seen in the office of County Judge, Livingston, and

at the office of L. H. Green, architect, Commercial Bank Building, Houston, Texas.

Louisville, Ky.—Clubhouse.—The Young Men's Institute is having plans prepared by J. J. Gaffney for the erection of a two-story brick clubhouse which will be equipped with a gymnasium, billiard hall and bowling alley. About \$30,000 will be invested.

Louisville, Ky.—Business Building.—Drs. A. M. Cartledge and James B. Bullitt have purchased site on which to erect five-story building.

Little Rock, Ark.—Hotel.—The Marlon Hotel Co. has been organized with Herman Kahn, president; Robert E. Walt, vice-president, and George W. Rogers, secretary-treasurer, for the erection of six-story hotel previously reported to be erected at a cost of \$250,000.

Lynchburg, Va.—Store Building.—C. W. Scott has secured permit to erect brick store building to cost \$7500.

Louisiana, Mo.—Store Building.—Michael Bros. have had plans prepared by Alex. Levy, 112 Clark street, Chicago, Ill., for a two-story press-brick, limestone and terra-cotta building; to have iron cornice, tin roof, tiling, hard plaster, plate glass, gas and electric lights, etc., and cost \$8000.

Louisville, Ky.—Library Building.—Pfleger & Tachau, architects, will receive bids until August 1 for the erection of two-story building 275x42 feet, with rear wing 50x60 feet, of fireproof construction, to be erected by the Louisville Free Public Library at a cost of \$250,000.

Louisville, Ky.—Office and Flat Building.—Dr. J. T. Windell has permit to erect three-story brick and stone office and flat building; cost \$7500.

Magnolia, Miss.—School Building.—Town contemplates issuing bonds for the erection of a school building. Address Town Clerk.

Memphis, Tenn.—Hotel Improvements.—The Memphis Hotel Co., J. S. Alsthorpe, secretary, is having plans prepared by Shaw & Pfeil for the erection of an addition to the Gayoso Hotel.

Memphis, Tenn.—Hospital.—Drs. F. D. Smythe and B. G. Henning are having plans prepared by Walk C. Jones for the erection of a four-story brick and stone fireproof building 50x100 feet, and will organize as the Smith & Henning Surgical and Gynecological Infirmary. Elevators, steam heat and fire-escapes will be included in the equipment.

Memphis, Tenn.—Parsonage.—The Second Methodist Church is having plans prepared by H. T. Forsyth for the erection of brick and stone parsonage to cost \$5000; G. W. Banks, pastor.

Memphis, Tenn.—Building.—D. D. Thompson & Son have contract to erect building for the Anne Brinkley Home, for which Alsop & Woods were previously reported as preparing plans; building to be seven stories, 55x66 feet, and cost \$47,000.

Memphis, Tenn.—Warehouse.—The H. Wetter Manufacturing Co. has contract to erect one-story brick warehouse 50x100 feet for the Memphis Queensware Co.; cost \$10,000.

Micanopy, Miss.—Store Building.—It is reported that S. H. Benjamin will rebuild brick store building recently burned.

Montgomery, Ala.—Capitol-building Improvements.—The Capitol Building Commission has adopted plans by Frank Lockwood for building the south wing to the capitol building, previously reported, for which \$70,000 is available.

Muldrow, I. T.—Bank and Store Buildings.—Dr. Fox has had plans prepared by A. Klingensmith, 523 Garrison avenue, Fort Smith, Ark., for a one-story bank and five store buildings of brick and stone.

Nashville, Tenn.—Dwelling.—J. B. Smith has contract to erect \$8000 residence for Watkins Crockett after plans by Thomas S. Marr.

Navasota, Texas.—Depot.—Bids will be received until July 24 at the office of the Engineer Maintenance of Way, Room 8, Grand Central Depot, Houston, Texas, for a one-story brick joint passenger depot at Navasota. Plans and specifications can be obtained at Room 9, Grand Central Depot, Houston, Texas, and will be sent to any address on receipt of \$10. The plumbing will be let as a separate contract.

Newberry, S. C.—Lodge Building.—The Masons and Knights of Pythias, previously reported as to erect lodge building, have organized as the Newberry Fraternity Hall Co., and will receive bids until July 15 for the erection of three-story brick building 52x76 feet, to be equipped with electric lights and cost \$7000; George Sellow, president and secretary.

Newberry, S. C.—Store Building.—James N. McCaughrin will erect five two-story brick store buildings.

Newton, Miss.—Bank and Office Building.—C. H. Dabbs, Meridian, Miss., has contract for the erection of the Merchants and Farmers' Bank proposed building; structure to be two stories, of stone, press brick and plate glass, and cost \$4000.

Oklahoma City, O. T.—Church.—Methodist Episcopal congregation has purchased site on which to erect edifice to cost about \$15,000.

Oklahoma City, O. T.—Dwellings.—Clarence Bennett has purchased site on which to erect a \$15,000 residence. J. Y. Thompson will erect a \$6000 residence on site purchased. Dr. W. H. Baldwin will erect a residence to cost \$8000. Dr. J. T. Riley has purchased site on which to erect a \$7000 residence.

Oklahoma City, O. T.—Hotel.—O. A. McClintock, H. D. Mathews of Oklahoma City and associates have incorporated the Hotel Threadgill Co. with \$25,000 capital stock.

Paducah, Ky.—Lodge Building.—Plans by O. B. Schmidt have been adopted for proposed three-story lodge building to be erected by the B. P. O. E.; cost \$25,000.

Palmetto, Fla.—Hotel.—The Palmetto Hotel Improvement Co. has been incorporated with \$12,000 capital stock by S. S. Lamb, J. A. Lamb, D. T. Jones and associates to operate a hotel.

Port Arthur, Texas.—College Building.—Bids will be received until August 1 at the office of A. M. Rutan, secretary of board, Bank Block, Port Arthur, Texas, for furnishing all materials and labor and erecting complete (except blackboards, wiring, plumbing, heating and ventilating) a three-story brick building about 138x155 feet, known as Port Arthur Manual Training, Commercial and High School, in accordance with plans and specifications on file in the office of the secretary, also in office of Wagner & Manning, architects, Denver, Col., and which may be obtained on deposit of \$20 with the secretary. Certified check, as stated in the specifications, must accompany each bid. Usual rights reserved.

Quitman, Ga.—Lodge Building.—Shalto Lodge No. 237, A. F. and A. M., has purchased site on which to erect proposed three-story building at a cost of \$8000.

Richmond, Va.—Hospital.—The Kellan Cancer Hospital will erect a \$25,000 building.

Ripley, W. Va.—School Building.—The Board of Education is receiving bids for the erection of school building for which \$13,000 of bonds was recently voted. Full information can be had by addressing Holly G. Armstrong, president.

Roanoke, Va.—Apartment-house.—Charles M. Ames, care of Roanoke Banking & Investment Co., will receive bids until August 1 for building an apartment-house for the Roanoke Improvement Co. Plans and specifications may be seen at the office of H. H. Huggins, architect, Terry Building, Roanoke.

Rocky Mount, N. C.—Hotel.—Chartered: The Rocky Mount Hotel Co., with \$100,000 capital stock, by Isaac Levy of Rocky Mount, J. H. Gall and Samuel L. Eichel of Richmond, Va. Messrs. Levy, Gall and Eichel were reported in April as having plans prepared by H. E. Bonitz of Wilmington, N. C., for the erection of a pressed-brick and stone hotel 75x120 feet, to be equipped with steam heat and electric lights, and cost \$50,000.

Salem, Va.—Jail Building.—Bids addressed to B. W. Logan or Thomas I. Preston, Salem, Va., will be received until August 10 for enlarging and remodeling the Roanoke county jail. Plans and specifications may be seen at the office of county clerk, and may be obtained by enclosing check for \$3.50 to J. N. Ambler, city engineer, Salem. Certified check for \$500, payable to the board of supervisors of Roanoke county, must accompany each bid. Usual rights reserved.

San Antonio, Texas.—Association Building.—The Young Men's Christian Association is completing arrangements for building two additional stories at a cost of \$10,000.

San Antonio, Texas.—School Buildings.—Board of Education has authorized the issuance of \$50,000 of bonds for the erection of school buildings, and an election will be held on August 5 to vote on the issue.

Sherman, Texas.—Church.—Rev. J. Blum, pastor St. Mary's Church, will receive bids until August 1 for the erection of edifice for the Catholic Church. Plans and specifications may be seen at the office of M. McManus. Usual rights reserved.

South McAlester, I. T.—Car Barns, Shops, etc.—It is reported that the Choctaw Railway & Light Co. will shortly begin the erection of car barns and shops.

South McAlester, I. T.—Hotel.—Place, Brickley & Walsh are preparing plans and will receive bids for a four-story hotel 90x115 feet for George Mansfield; to be of brick, stone and terra-cotta, tin roof, equipped with gas and electric lights, and cost \$50,000.

Sparta, Ky.—Warehouse.—W. H. Curer, H.

Winn, J. B. Grant, C. M. Guillon and B. W. Records have organized the Sparta Warehouse Co. for the erection of a tobacco warehouse.

Sparta, Ga.—Store and Lodge Building.—H. C. Hilliard has contract to erect store and lodge building for John D. Walker, reported last week, after plans by L. F. Goodrich; structure to be two stories, 48x35 feet, of ordinary construction, and cost \$6500. Freight elevators will be installed.

Spartanburg, S. C.—School Building.—W. B. W. Howe is preparing plans for school building previously reported to be erected; structure to be three stories, 83x63 feet, of brick, stone and granite, concrete flooring, tin and composition roof, and cost \$20,000. Bids for the construction will be received about July 15.

Spencer, N. C.—Association Building.—The Southern Railway has let contract to J. F. Grandy & Son, Greenville, S. C., for the erection of proposed railroad Y. M. C. A. building; to be of brick and wood with stone trimmings, 56x29 feet, equipped with electric lights, and cost \$25,000. Frank P. Milburn prepared the plans.

St. Louis, Mo.—Store and Apartment-house.—F. A. Bannister has purchased site on which to erect a three-story store and apartment-house 170x150 feet at a cost of \$100,000.

Temple, Texas.—Hospital.—The Santa Fe Hospital Association contemplates erecting brick and stone hospital.

Tioga, Texas.—School Building.—John Tulloch, Linz Annex, Sherman, Texas, has prepared plans for a two-story brick and stone school building 62x75 feet, to be erected at a cost of \$10,000.

Victoria, Texas.—Office Building.—The Bailey Mills Co. has contract for the erection of building 62x85 feet, to cost \$5000, for Haller Bros.

Washington, D. C.—District Building.—James L. Parsons, Lenman Building, reported last week as lowest bidder at \$965,000 for the erection of proposed District building, has been awarded contract; structure to be five stories, 241x190½ feet, of marble with granite base, steel-frame construction, terra-cotta and concrete fireproofing, slag and tile roofing, interior marble, equipped with six passenger and one freight electric elevator, pneumatic-tube system, electrical fixtures. A cold drinking-water plant will also be installed. Cope & Stewardson, 320 Walnut street, Philadelphia, Pa., prepared the plans. Boilers, steam piping, pumps and auxiliaries, engines, dynamos, heating plant, etc., were not included in the contract.

Washington, D. C.—Marine Barracks, etc.—F. L. Denny, colonel, quartermaster United States Marine Corps, Washington, D. C., will receive bids until July 20 for the construction of an addition to the marine barracks, including bandroom, messhall, gymnasium, completion of guardroom, prison and amusement room, Washington, D. C. Plans and specifications may be obtained on deposit of \$20 with the quartermaster. Proposal blanks, plans and specifications and other information may be obtained on application. Usual rights reserved.

Washington, D. C.—Dwelling.—B. F. Saul, 7th and L streets N. W., is erecting brick and stone residence for which Harry Wardman, 717 14th street N. W., was reported last week as having contract; structure to be 25x75 feet and equipped with hot-water-heating plant, gas and electric lights; cost \$10,000. N. K. Grimes, 627 F street N. W., prepared the plans.

White Sulphur Springs, Ga.—Hotel.—Dabney Scoville of Atlanta, Ga., who recently purchased the White Sulphur Springs property and 200 acres of land adjoining, will rebuild hotel and erect 25 cottages.

Wynne, Ark.—School Building.—Contract has been let to G. B. Thomason of Wynne and C. H. Allsted of Little Rock, Ark., at \$18,475 for the erection of proposed brick school building.

Washington, D. C.—Store Building.—Thos. Nolan, 1413 G street, has contract to make improvements to store building occupied by M. Phillipsborn & Co., referred to last week, and which is owned by Dr. T. V. Hammond; building to have steam heat, gas and electric lights, two electric elevators, etc. G. C. Cooper, 1413 G street, prepared the plans.

West Palm Beach, Fla.—Business Building.—C. C. Haight has contract to erect four-story building 26x80 feet of artificial stone for J. C. Stowers after plans by J. Maughlin; cost \$15,000.

CASTING WORK WANTED.

The Eagle Iron Works of Norfolk, Va., wants to correspond with manufacturers who are prepared to sublet their casting work.

RAILROAD CONSTRUCTION.

Railways.

Albertville, Ala.—Mr. John L. Ray writes the Manufacturers' Record that right of way is being secured through Marshall, DeKalb and Blount counties for a belt-line electric railroad 30 miles long. J. H. Hooper is manager, and G. M. Rains, assistant manager, both at Albertville, Ala., who should be addressed.

Anadarko, O. T.—Dyke Balingier of Anadarko is reported as saying that an electric railroad will be built from Anadarko via Chickasha, I. T., to Oklahoma City, about 55 miles.

Baltimore, Md.—Reported that the Baltimore & Ohio Railroad will enlarge the yards at Cumbo, near Martinsburg, W. Va. D. D. Carothers is chief engineer at Baltimore.

Beaumont, Texas.—President R. C. Duff of the Beaumont, Sour Lake & Western Railway is quoted as saying that the line will be extended to Houston as soon as possible.

Birmingham, Ala.—The Commercial Club has received a letter from Capt. W. H. Graves advocating a double-track railroad to the Warrior river or at some point above Tuscaloosa.

Bremen, Ga.—The Bremen & Southwestern Construction Co. has, it is reported, begun grading on the Bremen & Southwestern Railroad from Bremen to Bowden, 15 miles.

Bristol, Tenn.—The South & Western Railway, George L. Carter, president, is reported to be working on its extension eastward from Spruce Pine, N. C. It is also said that the company is working on its northern extension in Wise county, Virginia.

Chicago, Ill.—The Illinois Central, it is reported, has let contracts for the double-track work from Atoka, Tenn., to Millington, Tenn. This, it is said, will complete double track for nearly all the way from Chicago to Memphis, Tenn., the only single track being between Woodstock, Tenn., and Memphis. It is further said that a belt line would be constructed from Woodstock to the new yards south of Memphis. A. S. Baldwin is chief engineer.

Cincinnati, Ohio.—Reported that the Cleveland, Cincinnati, Chicago & St. Louis Railway is contemplating building an extension to Paducah, Ky. G. W. Kittredge is chief engineer.

Clarksburg, W. Va.—John Madill is president and J. R. Myers is secretary of the Ivory Hill Coal & Coke Co., which purchased the property of the Bljou Coal Co., and which proposes to build a railroad to develop it, the line to run along Elk creek and tributaries in Barbour and Harrison counties.

Columbia, Mo.—The proposed Columbia, Chicago & Northwestern Railroad is to be 33 miles long from Columbia to Clark, Mo., connecting at the latter point with the Wabash Railroad and the Chicago & Alton Railway. For 20 miles the line will be through coal lands. Clark has signed contract for terminals and eight miles of line. At Columbia a franchise has been granted for entrance and terminals. The county has granted privilege of roads. Already 21 miles of right of way have been secured, and the capital is ready to build the line. It is expected that it will be finished by June of next year. B. M. Anderson and others are interested.

Cumberland, Md.—The Western Maryland Railroad is reported to have completed survey for a low-grade freight route around Hagerstown, Md. J. Q. Barlow is chief engineer.

Dallas, Texas.—The Missouri, Kansas & Texas Railway is reported to be investigating preliminary to building 25 miles of line from McKinney to Denton, Texas. J. W. Petheram is chief engineer.

Darien, Ga.—H. D. Emerson, vice-president and general manager of the Darien & Western Railroad, is reported as saying that an extension will be built northward into Tattnall county.

Dodd City, Ark.—The Mineral Belt Traction Co. of Pyott, Ark., has been incorporated, the promoters, it is said, being nearly all Chicago capitalists. It is proposed to build an electric railway connecting Dodd City with Pyott, Kingdon Springs and Lead Hill. The officers are A. J. Bradford, president; Robert Somerville, vice-president; E. W. Swart, secretary; Neal Dodd, treasurer.

Dothan, Ala.—Construction is reported begun on the Atlanta, Dothan & Gulf Railroad by W. S. Wilson, B. I. Moody and J. M. Hollis, the contractors. The line will run from Dothan to either St. Andrews or St. Joseph, Fla.

Elizabeth City, N. C.—Reported that the Carolina Coast Railroad Co. has been organized to build a line from Norfolk, Va., to Beaufort, N. C. The officers are: W. B. Roper of Norfolk, president; W. T. Harris of

Norfolk, secretary; W. B. Rodman, Thomas Duncan, W. B. Roper, W. T. Harris and W. C. Rodman, directors.

Falls Church, Va.—The Washington & Virginia Transit Co. of Glencaryn, Alexandria county, has been chartered; capital \$100,000 to \$400,000. The officers are M. E. Church of Falls Church, president; W. C. Pennwitt of Glencaryn, first vice-president; M. C. Mitchell of Glencaryn, second vice-president; John B. Henderson, Jr., of Ballston, secretary, and Charles A. Kolb of Barcroft, treasurer. An electric railway will be constructed from Washington, D. C., through Fairfax, Loudoun and Fauquier counties, Virginia, by way of Aldie and Middleburg.

Fort Worth, Texas.—J. P. Hughes, chief contractor, proposes to sublet work on the Rock Island system from Rush Springs, I. T., westward into Oklahoma.

Galveston, Texas.—The Galveston, Houston & Henderson Railroad has been granted a franchise for a terminal track. J. H. Hill is manager at Galveston.

Gifford, Ark.—Mr. G. E. Mattison, manager of the Gifford & Southeastern Railway, writes the Manufacturers' Record that the line is practically all constructed and the company has all the material it needs at present. The line is about seven miles long from Gifford to Stewart, Ark.

Gulfport, Miss.—Construction of the electric road of the Gulfport & Mississippi Coast Traction Co. has begun, and it is expected that the line may be in operation to Biloxi and Pass Christian by midwinter. J. T. Jones is president of the company and H. C. Elder is secretary.

Hopkinsville, Ky.—President Dalton of the Hopkinsville Belt Line Railroad Co. is reported as saying that construction will begin in about two weeks. W. B. Spiker of Vincennes, Ind., is making the survey.

Houston, Texas.—The Houston & Texas Central Railroad proposes to build a line from Mexia, Texas, southward to connect with the main line between Millican and Navasota, about 90 miles. Thornwell Fay is vice-president and general manager.

Houston, Texas.—Steps are being taken, it is reported, to reconstruct and put in operation the Texas Western Railroad from Houston to Sealy. R. N. Hall can give information. Elijah Smith of Boston is said to be interested.

Indianapolis, Ind.—Thomas Taggart, Hugh J. McCowan, James M. Jones and others are reported interested in a plan to build an electric railroad from Memphis, Tenn., to Clarksdale, Miss., about 75 miles.

Jacksonville, Fla.—The Jacksonville, Fernandina & Southern Railway Co. gives formal notice that it will apply for charter to build a line 28 miles long from Jacksonville to Fernandina, Fla. The incorporators are Samuel A. Swann and William A. Evans of Fernandina, Fla.; John R. Young of Savannah, Ga.; William S. West and John W. West of Valdosta, Ga.; Frank Adams of Jasper, Fla.; Charles Darby and Eugene E. West of Jacksonville, Fla.

Jena, La.—Mr. G. Knobel, chief engineer of the Louisiana & Kansas Railway, is reported as saying that construction has started on the extension from Packton to Alexandria, La., 35 miles.

Joplin, Mo.—President A. H. Rodgers of the Southwest Missouri Electric Co. is reported as saying that the company will immediately begin an extension from Webb City northeast via Oronogo, Neck City, Purcell and Alba, connecting with the eastern end of the old line at Carthage, Mo.

Legore, Md.—James W. Legore, with an engineer, is reported to be working on the plan for the proposed electric railway to run from Washington, D. C., to Gettysburg, Pa., via Legore, Winfield, Taylorsville, Rocky Ridge and Emmitsburg, Md., with a branch to Westminster, Md. It is reported that construction will begin soon.

Louisville, Ky.—The Louisville & Nashville Railroad, according to a report from Knoxville, is said to be surveying for a branch from that city to marble quarries and iron mines near the forks of the Holston and the French Broad rivers. W. H. Courtenay is chief engineer at Louisville.

Lufkin, Texas.—T. A. McCarthy, chief engineer, is reported to be surveying for a railroad for the Bodan Lumber Co. from Pollock west to the Neches river and probably in Houston county. Contracts will be let immediately.

Madisonville, Ky.—The Madisonville, Hartford & Eastern Railroad Co. has been incorporated to build a standard-gauge line from Madisonville through Hopkins, Muhlenburg, McLean and Ohio counties via Hartford to Mitchell Station on the Louisville, Henderson & St. Louis Railroad. P. D. Grizzard is said to be making a survey. J.

W. Ford will be president. The other incorporators are H. H. Holeman, George R. Lynn and W. P. Ross, Madisonville; Rowan Holbrook, John T. Moore and R. E. Lee Simmerman, Hartford.

Mansfield, La.—The De Soto Land & Timber Co., it is said, is building 15 miles of standard-gauge railroad from Mansfield toward the Sabine river, six miles being now under construction. A. J. Peavy is general manager at Mansfield, and P. A. McCarthy, chief engineer at Lufkin, Texas.

Marshall, Texas.—President L. W. Lloyd of the Gulf, Texas & Northern Railway is reported as saying that the line is under construction both north and south of Washington. Northward to the Red river it will be 130 miles long and southward to Logansport, La., it will be 52 miles long. Extensions are proposed from Logansport to Sabine Pass, 160 miles, and from Logansport to Alexandria, 100 miles.

Mayfield, Ky.—Survey is reported complete for the proposed Cairo & Tennessee River Railroad, of which B. A. Neal and R. E. Lochridge of Mayfield are, respectively, president and treasurer. Line is to run from Bristol, Tenn., to Fort Jefferson, Ky., via Mayfield, crossing the State line in Whitley county, Kentucky. It will go through 14 counties.

McComb City, Miss.—The Liberty-White Railroad is reported to be surveying for extension from Liberty to Natchez, Miss., and to be securing rights of way. The extension from McComb to Columbia is now being built. W. M. White is general manager.

Memphis, Tenn.—The Union Railway Co. will, it is reported, build two miles of track to the river.

Mobile, Ala.—The Mobile & West Alabama Railroad has, it is reported, been organized to build its proposed line from Mobile to Florence, Ala., 325 miles. H. Austill and others are said to be interested.

Mobile, Ala.—President Bird M. Robinson of the Mobile, Jackson & Kansas City Railroad is reported as saying that there are 21 miles of track to be laid between Noxapater and Newton, Miss., and one bridge is to be completed to finish the line to a connection with the line southward from Middleton, Tenn. Delays have been experienced owing to the heavy rains. H. S. Jones is chief engineer.

Morgantown, W. Va.—Mr. J. A. Martin writes the Manufacturers' Record that the Sabaton Railway Co. has been organized to build an electric railroad from Morgantown to Dellslow. About three miles will be built immediately. The incorporators are James H. Stewart, Russell L. Morris, J. Ami Martin, Lindsey H. B. Peddicord and Frank P. Corbin, all of Morgantown. Mr. Martin is general manager.

Morgantown, W. Va.—Mr. F. K. Bretz, general manager of the Morgantown & Kingwood Railroad, writes the Manufacturers' Record that bids for the extension from Kingwood to Rowlesburg, about 18 miles, have been asked and will be opened some time this month. Construction is in charge of Julius K. Monroe, chief engineer at Kingwood, but Mr. Bretz does all the purchasing.

Nashville, Tenn.—Senator Joseph W. Bailey of Texas, who, with H. Clay Pierce of St. Louis and others, is interested in the Tennessee Central Railroad, is reported as saying that a number of important extensions will be made and a great deal of coal property developed. Some of this work will probably be done immediately. The projected extensions, it is said, will almost double the present mileage. L. F. Lonnbladh is chief engineer.

Norfolk, Va.—The Virginia & Carolina Coast Railroad Co. has been granted a charter to build its proposed line from Norfolk to Beaufort, N. C. The line will be about 200 miles long via Suffolk. The directors are R. T. Goodell of New York, president; Sidney Teiser, vice-president; T. C. Jones, second vice-president; W. W. Day, Jr., secretary and treasurer; T. D. Savage, general manager, all of Norfolk; Alan G. Burrow, John Upton, O. L. Shackelford, J. H. Day, Jr., Thomas W. Shelton and Lindsay Heard. It is said that three other companies will be absorbed, and that New Yorkers will then be elected as directors.

Pelham, Ga.—C. M. Bagges of Pelham is reported to be promoting a plan for a railroad from Pelham to Bainbridge, Ga.

Pensacola, Fla.—The Pensacola & Northwestern Railroad Co. has filed incorporation papers to build a line from Pensacola to Andalusia, Ala., about 75 miles. The incorporators are F. C. Brent, C. W. Lamar, C. M. Covington, John S. Avery and S. B. Milligan, all of whom are business men of Pensacola, most of them in the lumber or turpentine business.

Richmond, Va.—Reported that the Virginia

Passenger & Power Co. will build a line to Ashland very soon; also that a line will be built from Richmond to Norfolk.

Richmond, Va.—Mr. T. M. R. Talcott, general manager of the Tidewater & Western Railroad, writes the Manufacturers' Record that at present it is only contemplated to make needed improvements to the Farmville & Powhatan Railroad, which it was organized to operate, and to provide some additional equipment.

Richmond, Va.—The Chesapeake & Ohio Railway is reported to have begun another extension of 10 miles from the Big Sandy line in Kentucky in order to reach new coal lands in the Elkhorn region. F. I. Cabell is engineer of construction.

Savannah, Ga.—The Central Railway of Georgia has decided to issue \$600,000 of bonds to open up rich coal fields in Northern Alabama. H. M. Steele is chief engineer.

St. Louis, Mo.—Mr. A. W. Sullivan, general manager of the Missouri Pacific Railway, writes the Manufacturers' Record that the proposed terminal company at Memphis, Tenn., has not yet assumed any definite shape, and it is not probable that anything definite will be done within three months.

Savannah, Ga.—Concerning the press report that the Central of Georgia Railway might be interested in a proposition to build a road from Carrollton, Ga., via Bowden, Ga., into Alabama, Mr. Henry M. Steele, chief engineer, informs the Manufacturers' Record that there is nothing definite in the matter.

Shreveport, La.—The Louisiana Railway & Navigation Co. is reported to be securing rights of way for the proposed branch from Alexandria, La., to Harrisonburg, La., 45 miles, which it is believed will form part of the proposed Alexandria, Bayou Macon & Greenville Railway. Clarence Ellerbe, assistant to the president, may give information.

Spartanburg, S. C.—Mr. A. B. Calvert writes the Manufacturers' Record confirming the press report that the plan to build a railroad from Spartanburg to Rutherfordton, N. C., 30 miles, has been revived. The company has a charter and organization.

St. Louis, Mo.—The Missouri Pacific Railway will, it is reported, immediately begin work on reconstructing all its terminal yards at Kansas City. Many miles of new sidings are to be constructed on 90 acres of land in the east bottoms. A. W. Sullivan is general manager and E. F. Mitchell is engineer of construction.

St. Louis, Mo.—The Missouri, Kansas & Texas Railway Co. has filed a mortgage to secure \$40,000,000 of bonds which will be used to retire bonds now outstanding and to provide several million dollars for improvements. S. B. Fisher is chief engineer.

Trinity, Texas.—The proposed Beaumont & Great Northern Railroad will let contract soon for the first 20 miles from Trinity to Olanda, this to be followed by 40 miles more. William Carlisle & Co. are interested.

Washington, D. C.—The Southern Railway, it is reported, will survey next month for a railroad from Craig, Miss., to Yazoo City, Miss. W. H. Wells is engineer of construction.

Weston, W. Va.—The Coal & Coke Railway has, it is reported, extended its line from Adrian to Frenchton, W. Va., five miles, and also from Gassaway to the Little Otter Tunnel, three miles. It is expected to complete the 37 miles between Frenchton and Little Otter Tunnel ready to operate by the fall. A. A. Chapman is engineer.

Tulsa, I. T.—Mr. W. H. Hendren, chief engineer of the proposed Kansas City, Tulsa & Southwestern Railway, is reported to have made preliminary surveys from Tulsa to Wichita Falls, Texas; also from Tulsa to Oklahoma City, O. T.; also from Tulsa to Chetopa, Kan., via Talala and Collinsville. A survey has also been made from Chetopa to Joplin, Mo. It is said that the line has been financed and construction will begin from Tulsa to Chetopa as soon as an entrance to Tulsa has been secured.

Westminster, S. C.—Subscription books for the proposed Oconee County Railway Co. are to be opened next month at Townville, Fair Play, Tugaloo, Oakway and Westminster. J. W. Shelor is chairman of the board.

Wheatcroft, Ky.—The Kentucky Midland Railway, projected by Mr. Irving H. Wheatcroft, president of the Wheatcroft Coal & Mining Co., has changed its name to the Kentucky Valley Railroad Co. to avoid confusion with the Kentucky Midland previously incorporated.

Wilmington, N. C.—The Conway Coast & Western Railroad of South Carolina has, according to a dispatch from Conway, been purchased by James H. Chadbourne of Wilmington, promoter and builder of the Chad-

bourn & Conway Railroad, a branch of the Atlantic Coast Line. The Conway Coast & Western has been reorganized with the following directors: James H. Chadbourne, president; E. P. Schulken, secretary and manager; Benjamin Collins, Frank Burroughs and Charles Bolles. It is said that the extension will be pushed as rapidly as possible.

York, Pa.—Reported that John H. Dobbing of York has been given the contract for the new park and Fawn Grove Railroad, which will be about nine miles long and an extension of the Stewartstown Railroad.

Street Railways.

Chattanooga, Tenn.—President J. H. Warner of the Chattanooga Electric Railway is reported as saying that the company has ordered 500 tons of rails from the Pennsylvania Steel Co., and that the track improvements will cost about \$50,000.

Fort Worth, Texas.—A deal is reported closed for the Fort Worth and Arlington Heights car line, three and one-half miles long, and L. C. Cole of Defiance, Ohio, it is said, is now on hand preparing to build.

Gulfport, Miss.—The Gulfport & Mississippi Traction Co. has, it is reported, purchased the Biloxi Electric & Power Co. and will make the street railway part of this line. Capt. J. T. Jones is president.

Jackson, Tenn.—The Jackson & Suburban Car Co. is said to have closed a deal for an extension through the city and to Bemis.

Knoxville, Tenn.—The Knoxville Traction Co. has, it is reported, begun rebuilding the Jackson-avenue line. Next the Highland-avenue line will be rebuilt. Extensions are contemplated.

Lake Providence, La.—The Lake Providence & Goudsboro Railway Co., Ltd., has, it is reported, let a contract to A. B. Sanders of Shreveport, La., to build three miles of line from the river through Lake Providence and thence to Goudsboro.

Little Rock, Ark.—J. A. Trawick, general manager of the Little Rock Street Railway Co., is reported as saying that the Pulaski Heights Line will be double-tracked, probably as soon as possible.

Memphis, Tenn.—The Memphis Street Railway Co., it is said, will spend nearly \$3,000,000 for remodeling, extending and improving its property.

Meridian, Miss.—The Meridian Light & Railway Co. has begun an extension of its east-end line.

Newell, W. Va.—The Newell Street Railway Co. has been chartered to build an electric railway. The incorporators are Joseph G. Lee, H. N. Parker, Edwin M. Knowles, W. E. Wells and Walter B. Hill, all of East Liverpool, Ohio.

Texarkana, Ark.—The Texarkana Gas & Electric Light Co. has changed its name to the Texarkana Gas & Electric Co. and has also amended its charter to permit the construction of electric lines.

MACHINERY, PROPOSALS AND SUPPLIES WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Air Compressors.—See "Water-works Equipment."

Air Compressor.—Tomlin-Harris Machine Co., 9th street and Eleventh avenue, Cordele, Ga., will be in the market for an air compressor.

Air Lifts.—See "Pneumatic Tools, etc."

Asphalting Equipment.—Bids will be received until August 11 at the office of D. W. Ross, general purchasing agent, Isthmian Canal Commission, Washington, D. C., for furnishing sheet copper, copper rivets, asphalt melting furnaces and steam roller. Blanks and full information may be obtained on application to the office of general purchasing agent, Washington, D. C., or at the offices of assistant purchasing agent, 24 State street, New York, N. Y.; custom-house, New Orleans, La.; 36 New Montgomery street, San Francisco, Cal., and Tacoma, Wash.;

also from chief quartermaster department of the lakes, Chicago, Ill., and the Commercial Club, Mobile, Ala.

Automatic-sprinkler System.—See "Fire-protection Apparatus."

Baling Press.—G. E. Patrick, Seebert, W. Va., is in the market for an excelsior machine baler.

Boiler.—See "Water-works Equipment."

Boiler.—See "Engine and Boiler."

Boiler.—F. M. Laxton, Atlanta, Ga., will purchase for the Board of Public Works, Morganton, N. C., one 125-horse-power return tubular boiler.

Boiler.—Hartselle Planing Mill, John H. Rogers, proprietor, Hartselle, Ala., is in the market for one vertical second-hand 25 to 35-horse-power boiler.

Boiler.—R. A. Zoeller, Tarboro, N. C., is in the market for a 150-horse-power water-tube boiler to carry 150 pounds steam pressure. Send catalogue describing boiler; also state what evaporation will guarantee.

Boilers.—The G. B. Lesh Manufacturing Co., Station G, Memphis, Tenn., wants competitive prices on two 85-horse-power 60-inch by 16-foot boilers, three-inch tubes.

Boilers.—See "Engines and Boilers."

Boilers.—See "Engines and Boilers."

Boilers.—Leonard Vyne, Nicanor, N. C., is in the market for one 100 to 125-horse-power return-tubular boiler and one 60 to 80-horse-power boiler. (See "Engine and Boilers.")

Bolt Manufacturers.—S. Howard Merryman, Towson, Md., wants addresses of manufacturers of machine bolts. Will want to have a lot of steel bolts made.

Bridge.—The Town Council of Cave Springs, Ga., wants to purchase an iron foot bridge, 8x70 feet. Address Frank Wright, mayor.

Bridge Construction.—Contract will be let July 20 to the lowest bidder at the office of John W. Walker, supervisor Greenville county, Greenville, S. C., for the building of a steel bridge over the Saluda river near the dam of the Saluda River Power Co.; main span and approaches to be 140 feet; plans and specifications shown on day of letting. Will also let the building of piers of said bridge on July 21 at site of bridge.

Building Materials.—C. A. R. Euson, 319 North Charles street, Baltimore, Md., wants prices on ornamental iron work, metal frames and sashes glazed with wireglass, etc.

Building Materials.—H. M. Johnson, Gadsden, Ala., is in the market for plate glass, also sheet glass.

Building Materials.—Burlington Hardware Co., Burlington, N. C., wants prices on building materials.

Creosoting Plant.—Lawrence, P. O. Box 1690, New Orleans, La., wants information regarding cost of creosoting plant.

Cement.—C. A. R. Euson, 319 North Charles street, Baltimore, Md., is in the market for 500 barrels of Portland cement.

Chairs.—See "Theater Equipment."

Concrete Work.—Bids will be received between July 10 and July 20 for approximately 9000 yards of concrete arches, piers and abutments between Montezuma, Ga., and the Chattahoochee river, about eight miles west of Lagrange. Separate bids will also be received at the same time for approximately 2,500,000 feet B. M. of trestling to be built between Pashal, Ga., and Chattahoochee river. Usual rights reserved. For further information address Alex. Bonnyman, chief engineer, Oglethorpe, Ga.

Dredging.—Bids will be received until August 11 at the engineer office, United States army, Room 2, Custom-house, Norfolk, Va., for dredging Pagan river, Virginia. Information furnished on application; E. Eveleth Winslow, captain, engineers.

Dry-kilns.—Leonard Vyne, Nicanor, N. C., is in the market for dry-kilns.

Electrical Equipment.—Elba Manufacturing Co., Charlotte, N. C., wants a first-class new or second-hand motor to develop from 70 to 90 horse-power; the voltage will be 550.

Electrical Equipment.—Aug. L. Chappuis, Rayne, La., is in the market for machinery and equipment for electric-light and power plant.

Electrical Equipment.—C. A. R. Euson, 319 North Charles street, Baltimore, Md., wants estimates on electric wiring one-story bank building.

Electrical Equipment.—Box H, Spray, N. C., wants lowest delivered price on one 40-kilowatt direct-current compound-wound dynamo, 125 volts. State speed and send cut.

Electrical Equipment.—See "Elevators."

Electric-light Plant.—W. H. Nunnally, mayor, Monroe, Ga., will receive bids until July 31 for machinery and material and installing complete an electric-light plant. The plant to embrace two 66x18-inch high-

pressure boilers, one 175-horse-power Corliss engine, one 120-kilowatt A. C. generator, 15 arc and 40 50-candle-power street lights, 900 light transformers capacity and pole line. For specifications, forms of proposal, address W. H. Nunnally, chairman; J. B. McCrary, Senola, Ga., engineer.

Electric-light Plant, etc.—J. A. Corbell, Box 64, Charleston, Ark., wants full information, prices of machinery and equipment and estimated cost of construction of electric plant to furnish light to 600 residences, 100 stores, and 20 arc lights, including generator, wire, etc.; also cost of equipment for power plant to operate a motor car 20 miles.

Electric Plant.—Ineeda Laundry Co., Beaumont, Texas, wants information regarding the use of electricity for power instead of steam.

Electric-power Plant.—See "Electric-light Plant, etc."

Elevators.—Peden Iron & Steel Co., P. O. Drawer P, Houston, Texas, wants competitive prices on two freight elevators, electric, one 5000 pounds capacity and one 2500 pounds capacity, speed 60 feet per minute each, platforms approximately 6 feet wide by 12 feet long each, to be complete with electric motors, 15 horse-power for the larger and 10 horse-power for the smaller motor, 500 volts, all complete with a lift of 21½ feet from basement to second story; elevators to be equipped with eight semiautomatic gates, self-closing, but not self-opening. Quote prices complete f. o. b. cars Houston, Texas, with guarantee as to how soon shipment can be made after receipt of order.

Engine.—The Britton Lumber Co., Lakewood, Fla., is in the market for one 40-ton second-hand Rod engine.

Engine and Boiler.—See "Electric-light Plant."

Engine and Boiler.—F. M. Laxton, Atlanta, Ga., will purchase for the Board of Public Works, Morganton, N. C., one engine of 25 horse-power at 115 pounds and one return tubular boiler of 125 horse-power.

Engine and Boilers.—Leonard Vyne, Nicanor, N. C., is in the market for a 11x15 to 12x16 center-crank engine, a 100 to 125-horse-power return-tubular boiler and one 60 to 80-horse-power boiler.

Engines and Boilers.—Burlington Hardware Co., Burlington, N. C., wants prices on engines and boilers.

Engines and Boilers.—Dieter & Wenzel, Joplin, Mo., want prices on engines and boilers for heating purposes.

Feed-water Heater.—F. M. Laxton, Atlanta, Ga., will purchase for the Board of Public Works, Morganton, N. C., one 200-horse-power closed feed-water heater.

Fire-protection Apparatus.—Peden Iron & Steel Co., P. O. Drawer P, Houston, Texas, wants estimates on automatic-sprinkler system.

Flooring Machines.—The Britton Lumber Co., Lakewood, Fla., is in the market for two flooring machines 6x8 and 6x15, second-hand (S. A. Wood or Glencoe preferred). State price and condition.

Heading Machinery.—Leonard Vyne, Nicanor, N. C., is in the market for heading machinery.

Heating Apparatus.—C. A. R. Euson, 319 North Charles street, Baltimore, Md., wants estimates on heating apparatus for one-story bank building.

Heating Apparatus.—Board of Supervisors of Monroe county, Aberdeen, Miss., will receive bids until August 7 for the installation of a steam-heating system in jail building, to consist of radiators as indicated on the various floor plans, a Mercer sectional boiler, together with all the necessary steam pipe, fittings, etc., to complete system, in accordance with plans and specifications adopted by the board and on file in the office of O. P. Smith, clerk, and which may be had on application to Andrew J. Bryan, architect, 708 Hennen Building, New Orleans, La. Certified check for \$100 must accompany each bid. All bids to be addressed to the president of the board of supervisors or to the clerk of board. Usual rights reserved.

Ice Plant.—D. L. McPherson, Abbeville, La., wants best prices on 15-ton ice and refrigerating plant.

Looms.—See "Weaving Machinery."

Lumber.—See "Concrete Work."

Mattress Machinery.—D. D. Wilkins, Shelby, N. C., wants addresses of manufacturers of machinery for making felt and cheap mattresses.

Metal Frames and Sashes.—See "Building Materials."

Office Fixtures.—D. L. McPherson, Abbeville, La., wants roller shelf and document-file vault fittings for clerk and recorder's office. Send illustrations.

Paving.—Board of Public Works, W. R. Fuller, president, First National Bank Building, Tampa, Fla., will receive bids until July 25 for paving with vitrified brick and granite curbing of approximately 16 miles of streets. Specifications for work can be obtained from the office of the engineer of board, from whom blank forms can be secured. Bids to be made for each street and alley separately. Certified check in 3 per cent. of amount of bid must accompany each bid. Usual rights reserved. (See "Sewerage.")

Paving.—Bids will be received until July 15 at the office of T. C. Moffat, clerk of the board of commissioners of Ohio county, Wheeling, W. Va., for laying about 2000 square yards of brick paving at Highland Park on the National road; also for excavating about 1200 cubic yards on the new road from foot of Shannon's Hill, on Shore creek, to the Reilly-Delaplaine road. Profiles and specifications may be seen and form of proposal obtained at the office of Herman L. Arlenz, county engineer, 1505 Chapline street, Wheeling. Usual rights reserved.

Paving Bricks.—Bids will be received at the office of the general purchasing officer, Isthmian Canal Commission, Washington, D. C., until August 5 for furnishing 4,000,000 paving bricks. Blanks and full information may be obtained at office of general purchasing officer, Washington; at the office of assistant purchasing agent, 24 State street, New York, N. Y.; custom-house, New Orleans, La.; 26 New Montgomery street, San Francisco, Cal., and Tacoma, Wash.; also from chief quartermaster, department of the lakes, U. S. A., Chicago, and the Commercial Club, Mobile, Ala.; D. W. Ross, general purchasing officer.

Paving Material.—Roger Moore, Box 191, Wilmington, N. C., wants prices on vitrified paving brick or blocks in cargo or carload lots delivered at Wilmington, N. C.

Piano.—See "Theater Equipment."

Piano-factory Supplies.—Houston Showcase & Manufacturing Co., Houston, Texas, wants addresses of manufacturers of piano fittings, such as keys, strings, etc.

Piping, etc.—Burlington Hardware Co., Burlington, N. C., wants prices on pipe and pipe fittings.

Pipe-threading Machine.—Decker Well Supply Co., Humble, Texas, is in the market for a first-class second-hand pipe machine for cutting and threading pipe from 3 to 10 inches or 3 to 8 inches. State make and price.

Plumbers' Supplies.—Burlington Hardware Co., Burlington, N. C., wants prices on plumbers' supplies.

Plumbing.—C. A. R. Euson, 319 North Charles street, Baltimore, Md., wants estimates on plumbing for one-story bank building.

Plumbing.—Board of Supervisors, Parham Williams, clerk, Lexington, Miss., will open proposals August 7 for furnishing plans and specifications and erecting and equipping (or equipment only) for a water-closet in the courtyard at Lexington; closet to have six seats with urinal attached, sewer pipe not less than eight inches, to be laid about 300 yards. Usual rights reserved.

Pneumatic Tools, etc.—Tomlin-Harris Machine Co., 9th street and Eleventh avenue, Cordele, Ga., will be in the market for pneumatic tools and lifts.

Power-house.—Bids will be received until August 1 at the bureau of supplies and accounts, Navy Department, Washington, D. C., for the construction at the Naval Hospital, Washington, D. C., of a power-house 88.6x26.6 clear head room and of a perforated radial molded brick chimney 75 feet high above foundations and having an internal diameter of not less than 3.8. Copies of plans can be obtained on application to the bureau of medicine and surgery, Navy Department, Washington, D. C. Applications for proposals should refer to Schedule 31. Blank proposals furnished on application; H. T. B. Harris, paymaster-general, United States navy.

Pump.—F. M. Laxton, Atlanta, Ga., will purchase for the Board of Public Works, Morganton, N. C., one boiler-feed pump.

Pumps.—See "Water-works Equipment."

Railway Equipment (Electrical).—The Sabaton Railway Co., Morgantown, W. Va., J. A. Martin, general manager, is in the market for 250 tons of good relaying rails, 60-pound sections; will also be in the market for all kinds of material used in the construction of electric roads.

Railway Equipment.—The Northeast Texas Railway Co., V. E. Buron, secretary, Texarkana, Texas, is in the market for a second-hand combination baggage, mail and passenger car.

Railway Equipment.—Joseph E. Bowen, Atlantic Office Building, Norfolk, Va., is in the market for a lot of 30-inch gauge Russell No. 2 log cars.

Railway Equipment (Electrical).—Aug. L. Chappuis, Rayne, La., is in the market for rails, spikes, motors, cars, etc., for a five-mile electrical road.

Railway Equipment (Electrical).—J. A. Corbell, Box 64, Charleston, Ark., wants prices on 20 miles of 8, 12 and 16-pound steel rails, with sufficient spikes, etc., ready to lay; cost with and without ties. Also want estimated cost for building road 20 miles long with eight-pound steel rails, three motor cars to correspond, including power generator and overhead wires, and cost as compared with steam-power. (See "Electric-power Plant.")

Roller Brushes.—G. E. Patrick, Seebert, W. Va., is in the market for roller brushes.

Well Drilling.—Rock Hill Water, Light & Power Co., Rock Hill, S. C., wants prices on drilling an 8 and 10-inch well.

Roofing.—Independent Oil and Fertilizer Works, Columbia, Miss., wants addresses of manufacturers of steel and tile constructed fireproof roofing.

Scales.—C. L. Hawn & Son, Hickory, N. C., are in the market for a pair of wagon scales, and want prices.

Scenery.—See "Theater Equipment."

Seating.—Walter J. Smith, architect, Bramwell, W. Va., wants estimates for seating new Methodist Episcopal Church.

Sewerage.—Board of Public Works, W. R. Fuller, president, First National Bank Building, Tampa, Fla., will receive bids until July 25 for furnishing the material and labor necessary for the construction of approximately 17 miles of sanitary sewers of vitrified salt-glazed terra-cotta pipe with such Ys, Ts, manholes, lampholes, flushtanks, and foundation plank as may be necessary. Specifications can be obtained from the office of the engineer of the board, from whom blank forms can also be obtained. Certified check for 3 per cent. of amount of bid must accompany each bid. Usual rights reserved. (See "Paving.")

Steel Rods.—Louisiana Shipping & Export Co., Ltd., 1001-2 Hibernia Building, New Orleans, La., wants addresses of manufacturers of steel rods; wanted in sizes from two inches down in lengths from 20 to 40 feet.

Stonework.—Bids will be received until July 29 at the office of Elliott Woods, superintendent United States Capitol Building and Grounds, Department of the Interior, Washington, D. C., for cut stonework for the exterior facades and the court walls of the office building, United States Senate. Plans and specifications will be furnished upon receipt of a check for \$50 payable to the superintendent United States Capitol Building and Grounds. Usual rights reserved.

Sugar-mill Machinery.—Liddell Machinery & Supply Co., 124, 126 and 128 Commerce street, Montgomery, Ala., wants addresses of manufacturers of sugar-mill machinery.

Tank and Tower.—Lalb Company, 441 West Main street, Louisville, Ky., is in the market for a 30,000-gallon steel tank and 90-foot steel tower.

Theater Equipment.—Eugene A. Burch, secretary and general manager Wigwam Stock Co., Hawkinsville, Ga., is in the market for chairs, seating and piano for theater.

Vehicles.—Gaudin Undertaking Co., 1711 Second avenue, Birmingham, Ala., will buy vehicles for undertaking business.

Water-closet.—See Board of Supervisors under heading "Plumbing."

Water Motors.—E. B. Stevens, Washington, Ga., wants addresses of manufacturers of water motors.

Water-works Equipment.—The Borough of Oxford, Oxford, Pa., will receive bids until July 17 for all the necessary foundations, standpipe, power-house, boiler, steam pumps, air compressors and certain street mains (12 and 8 inches in diameter), all placed in position according to plans and specifications on file in the office of the Borough of Oxford, or will be sent to any address on deposit of \$10. Supplement bids will also be received for gas-driven apparatus; D. M. Menough, chairman water committee; York (Pa.) Engineering Co., engineers.

Weaving Machinery.—Eberhard & Eborn, Hartford, N. C., want information and prices on machinery for manufacturing carpet rugs.

Well-drilling.—W. L. Gardner, Bruno, Va., wants prices on well-boring machines.

Well-drilling.—The Town Council of Salem, Va., will sink a 10-inch deep well, and wants bids from contractors prepared to sink a well 2000 feet deep. For further information address W. B. Dillard, chairman water committee.

Woodworking Machinery.—See "Heading Machinery."

Woodworking Machinery.—W. G. Stokes, Stokes, N. C., wants to purchase a new or good second-hand planer and matcher, molding machine (one heavy enough to do first class work), resaws and rip saws.

Woodworking Machinery.—A. T. Snodgrass & Co., Thomasville, Ga., are in the market for second-hand machinery and equipment for the manufacture of sash, doors, blinds, window frames and general building material.

MEXICO.

Copper Mines.—J. P. Julio of New York has purchased and will develop the Sederita copper mines in Mapimi, Durango. It is stated he paid \$250,000 for the property.

Hydraulic-power Plant.—Jose M. Velazquez, hydraulic engineer, Guadalupe, Mexico, has obtained a concession to utilize the waters of the Tlalneapantla, Remedios and Uaido rivers for the development of power and the establishment of a power plant.

Mining Developments.—The San Luis Mining Co. is preparing to install additional machinery at its gold and silver mines; also its copper properties in Durango, Mexico. New mines will also be opened; office at 27 William street, New York.

Paint Factory.—A company is being organized with capital stock of \$250,000 to manufacture fireproof paint. Messrs. Diaz & Sala, Ortega 28, City of Mexico, are to be the managers.

Railways.

Steam Railroad.—Reported that the Mexican Central Railway, which is building an extension from Tuxpan to Colima, has purchased the railroad from Colima to Manzanillo, 89 miles long, which will give the desired outlet to the Pacific coast at the latter port.

Electric Railway.—The proposed Jalisco & Michoacan Railroad, Second San Francisco, No. 5, has, it is reported, increased its capital from \$1,500,000 to \$10,000,000 to build its electric railway from Guadalajara to Lake Patzenaro, about 300 kilometers. William Vernon Backus is vice-president and J. N. Zermeno is manager.

INDUSTRIAL NEWS OF INTEREST

A 200-Foot Steel Trestle.

A steel-frame trestle approach 200 feet long will be erected at Frankstown, Pa., for the American Lime & Stone Co. The work is being done by Wm. B. Scaife & Sons Company of Pittsburgh, which also furnished the design for same.

Talc Lands for Sale.

Manufacturers of talc or others likely to be interested in the development of a talc property are invited to write D. A. McDonald, Carthage, N. C. Mr. McDonald offers for sale 2750-acre tract containing one mile of big-vein talc, located near railroad and water-power where 500 horse-power can be developed. Send for full particulars.

Southern Mills for Sale.

A public sale of the cotton-mill properties of the Southern Textile Co. will be held at the auction-rooms of Charles Shongood, 113 Leonard street, New York, on July 25. The plants include Windsor Mills near Burlington, N. C.; Chieora Mill, Rock Hill, S. C., and Moorhead Mill, Moorhead, Miss. These mills are equipped for manufacturing cotton

goods, and full information concerning them can be obtained by addressing Walter Coles Cabell, trustee in bankruptcy, 170 Broadway, New York city.

Flour Mill for Sale.

A modern flour-milling plant on the Norfolk & Western Railroad five miles from Roanoke, Va., is offered for sale. The property includes brick building and up-to-date equipment for producing 50 barrels of flour daily by the full-roller process, using steam-power. It is claimed that this offering constitutes an exceptional opportunity to a purchaser. The mill is fitted with the well-known Nordyke & Marmon machinery. Full particulars can be obtained by addressing S. E. Bonsack, Bonsack, Va.

All Kinds of Drying.

The amazing variety which exists in the applications of hot-blast drying apparatus is exemplified by recent installations made by the B. F. Sturtevant Company of Boston, Mass. Among these are comprised installations for drying hops in the Sacramento valley, lumber in Iowa, cloth in North Carolina, brick in Georgia, gunpowder in New

Jersey, lace curtains and handkerchiefs in Illinois, fish fertilizer in New York, rubber in Massachusetts, artificial leather in New Jersey and plaster in New York.

N. B. Porter's New Position.

An interesting announcement comes from the Continental Car & Equipment Co., offices in the Whitehall Building, New York. The company states that it has retained N. B. Porter as general manager of its sales department, and he invites the continued patronage of former customers. Mr. Porter was lately associated with the South Baltimore Steel Car & Foundry Co. of Baltimore and the Ryan-McDonald Manufacturing Co., Baltimore, and is well known to the railway equipment buyers of the country.

Alfred H. Taylor, Architect.

Building owners, contractors and others interested in the work of the architectural profession are invited to note that the well-known Baltimore architect, Alfred H. Taylor, has removed his offices from No. 11½ Pleasant street to Rooms 71, 72 and 73 Hanover Building, 110 West Fayette street. Mr. Taylor prepared the plans and specifications for the Hanover Building, as well as for the National Mechanics' Bank, the National Exchange Bank and other large and costly structures built in Baltimore since the fire. He has offices also at 53 W. 33d street, New York.

A New Bulldog.

Nearly everyone sometimes needs a weight to hold them down or a bulldog to watch their interests. With this in mind the Trinidad Asphalt Manufacturing Co. of St. Louis is sending to its friends a most acceptable desk weight. The article is of glass, through which can be seen a bulldog which calls attention to the facilities which the Trinidad Company offers. The company mines and refines asphalt and manufactures compounds for insulating, preservative paints, sheathing papers, roofing cement, car roofing, roofing and paving pitch and various other products of a kindred nature.

"Ideal" Engine Sales.

The New York offices, 11 Broadway, of Messrs. A. L. Ide & Sons, builders of the "Ideal" engines, have made a number of sales recently, including the following: Wilkesbarre (Pa.) Gas & Electric Co., two direct-connected units; Hackensack (N. J.) Water Co., one direct-connected unit; Campana Exportadores Combustible, one belted engine; city of New York for Williamsburg bridge, three direct-connected cross-compound units; Anglo-Chilean Nitrate & Railway Co., one belted unit, and Edison Electric Illuminating Co., three special units to operate blowers. The Ide manufacturing plant is located at Springfield, Ill.

Big Order From Europe.

Pneumatic tools are rapidly being introduced in the shipbuilding and other large industrial plants of Europe. American manufacturers are figuring prominently in supplying the tools, and recently a big order was booked by the Chicago Pneumatic Tool Co. of Chicago. The order calls for 3400 tools to be shipped from America, the total cost of the machines amounting to \$300,000. J. W. Duntley, president of the company, obtained the contract on his recent trip, when he spent six weeks in Europe in the interest of his company. It is also interesting to add that the English courts have sustained the claims of the company, thus leaving the English company in a particularly strong position with reference to its patents.

Sprout-Waldron Contracts.

The well-known builders of Monarch mill machinery, Messrs. Sprout, Waldron & Co. of Muncy, Pa., have closed a large number of important contracts recently. These contracts include the following: 75-barrel flour mill for J. B. Boyd, Allensville, Ky.; 40-barrel flour mill for W. A. Price & Bro., Price's Fork, Va.; 35-barrel full roller process buckwheat mill for F. W. Leon, Renown, W. Va.; 50-barrel flour mill for C. J. Bickle, Barrington, Mich.; 150-barrel flour mill for Crookston (Minn.) Milling Co.; 50-barrel flour mill for J. D. Neigh, Waterbury, N. Y.; 125-barrel flour mill for Atlas Milling Co., Nashville, Tenn.; 25-barrel flour mill for Wilson & Girdler, Lorenz, Ky.; 50-barrel flour mill for Bass Foundry & Machine Co., Rock Run, Ala.; 25-barrel flour mill for W. L. Snyder, Levels, Va.; 25-barrel flour mill for O. S. Wallace, Craigsville, Pa.; 60-barrel flour mill for Monarch Milling Co., Elizabethton, Tenn.; 25-barrel flour mill for Hutcheson & Clark, Edenburg, Va.; 25-barrel flour mill for E. V. Sampson & Son, Stockdale, Ohio; 50-barrel flour mill and 50-barrel buckwheat mill, including feed and meal mill, for Carlsburg & Lewis, Westford, Pa.; and 25-barrel wheat and buckwheat mill for W. E. Reed,

Riverside, New Brunswick. Messrs. Sprout, Waldron & Co. have also received numerous contracts for special machines to change mills to the Monarch system, including the following: Robert George & Son, Stuart, Va., sieve bolter, etc.; J. G. Johnson, Perley, Minn., rerolls, sifters, etc., to model to 150-barrel; Walkertown Milling Co., Walkertown, N. C., machinery to increase capacity; F. B. Crawford, East Penbrook, N. Y., rolls, sifters, etc., for 75-barrel mill; H. S. Johnson, Middletown, N. Y., special grinding and bolting machinery; D. S. Miller, Battenville, N. Y., complete feed and meal outfit; Jos. Champney, Briggsville, Wis., rolls, sifters, etc., for 80-barrel mill; R. A. Locke, Lynchburg, Tenn., rolls, sifter, etc., for 60-barrel mill; W. H. Helston Mill Construction Co., Martinsburg, Va., Monarch sieve bolter; George C. Hill, Newtonville, Ohio, sieve bolter, etc.; J. A. Resler, Caledonia, Ohio, special elevator machinery; Spangler Milling Co., Spangler, Pa., special elevator machinery; S. H. Scott, Lucama, N. C., burr-mill outfit for flour; Penrose Wolfe, Rockwood, Pa., special elevator machinery; Joseph Milling Co., Joseph, Ore., Monarch sieve bolter for 75-barrel mill; George L. Buckwalter, Lancaster, Pa., sifter, etc.; D. F. Johnson, Doyle Station, Tenn., rolls, etc., and James Johnson & Sons, Monterey, Va., buckwheat milling outfit.

The R. C. Foster Company.

There is a large and steadily-increasing demand in the South for structural iron and steel for bridges and buildings, and for railway materials and supplies. This demand is attracting the attention of the best manufacturers and representatives more and more every day, and ample facilities are being provided to meet the condition of the market. Southern buyers will be interested to know that the R. C. Foster Company of 1734 Land Title Building, Philadelphia, is in a position to submit estimates on products of the classes mentioned. This company has located its Southern offices at 124 East Bay street, Savannah, Ga. C. B. Deming, previously with the Savannah Car & Manufacturing Co., being in charge. It offers beams, channels, angles, tees, structural steel and iron, etc., according to order or to plans and specifications; also new and relaying rails, plates, bar iron, bolts, nuts, washers, malleable and steel castings, etc. The R. C. Foster Company is representing the Eastern Steel Co. of Pottsville, Pa., which recently completed its large new plant. Contractors, builders, engineers, railway companies and others who purchase such manufactures are referred to are invited to submit their data for estimates before making contracts.

TRADE LITERATURE.

About Metal Shingles.

The building trades should not fail to keep informed regarding the latest developments in roofings, and will be aided in doing so by reading the Cortright Metal Shingle Advocate. This is a little monthly publication sent out by the Cortright Metal Roofing Co. of Philadelphia. Send for a sample copy. The July issue is now ready.

Air Washers and Filters.

Air washers and air filters are the subject for a new circular which has been issued by the New York Blower Co. It shows the different devices for wet and dry process and gives valuable information to those interested in the question of cleaning air for heating, ventilating, drying, etc. The circular will be sent by applying to the New York Blower Co., 25th Place and Stewart avenue, Chicago.

"Little Jap" Hammer Drill.

The demand for information regarding the "Little Jap" Hammer Drill has been so great that the manufacturer of that tool has issued another edition of its pneumatic-tool department describing the drill. This is Bulletin No. 2003, and it contains some information additional to the facts presented in the previous bulletin on the "Little Jap." Write the Ingersoll-Sergeant Drill Co., 26 Cortlandt street, New York, for a copy.

A Modern Shop Equipment.

The new shops of the Canadian Pacific Railway near Montreal are in some ways distinctly ahead of any other railway shops. Their tool equipment was selected with great care, and particular attention was given to the increased power and rigidity required, in order to use high-power tool steels to their full capacity. The Niles-Bement-Pond Company of New York secured the order for practically all the large machines. Most of the machines are driven by direct-connected motors, doing away with the line shafting in the main machine bay. These shops were planned for repairing 50 locomotives and

building six new locomotives per month. They are the subject of illustration and description in the Progress Reporter for July. Ask the Niles-Bement-Pond Company for a copy.

Direct-Current Generators.

Bulletin No. 53 of the Crocker-Wheeler Company illustrates and describes direct-current lighting and power generators of the very latest design and construction and of proven efficiency in the best-regulated plants. This new bulletin supersedes No. 43, which was devoted to the same subject. People who are interested in modern electrical machinery should not fail to read this bulletin. Write the company at Ampere, N. J., for a copy.

Gem Cement Tools.

Cement workers who want to be informed as to one of the latest complete lines of tools for their special industry will find the Kramer Bros.' "Gem" booklet of special interest. This little publication illustrates edgers, jointers, inside square-angle tools, inside round-angle tools, outside round-angle tools, curb tools, cutters, nameplates, letters and figures, rollers, etc. These tools are modeled after the most successful designs found to give the utmost satisfaction in actual practice. They are manufactured by the Kramer Bros. Foundry Co., Dayton, Ohio.

Electric Grinders and Buffers.

Manufacturers and other operators who have grinding and buffing to be done as a part of their work should read Bulletin No. 48 of the Northern Electrical Manufacturing Co., Madison, Wis. This publication tells of the Northern Electric grinders and buffing equipments. The emery grinders are of special design and construction, including heavy crucible tool-steel armature shafts, liberal bearings and dustproof covers. The standard emery grinders and buffing lathes are equipped with speed-regulating devices so that the speed of the grinding and buffing wheels can be varied to compensate for the varying diameters of the wheels. An examination of the bulletin referred to shows interesting illustrations as well as clear descriptions of the grinding and buffing machines made by the Northern Company.

Information on Light Locomotives.

A series of illustrated pamphlets describing light locomotives is being issued by one of the best-known builders of locomotives. These publications give information that will be of value to anyone interested in locomotives. They refer to various types made for contractors, mines, logging roads, plantations, brick plants, quarries, switching, passenger and freight. The locomotives built for these uses may be of standard types or according to plans and specifications as furnished by the purchasers. Each locomotive is fully guaranteed to be of the best material and workmanship, accurately constructed to duplicate system and to develop the tractive force specified. Moreover, each individual part is guaranteed to be free from physical defects. The Davenport Locomotive Works of Davenport, Iowa, builds the locomotives in question and is prepared to send the pamphlets to inquirers.

Customs Tariffs of the World.

"Kelly's Customs Tariffs of the World" is a work that will prove valuable to manufacturers and dealers engaged in exporting their products. The book comprises the various customs tariffs in force throughout the world, and by the aid of the index exporters are enabled to see at a glance what duty, if any, is levied on any article imported into any country. There is also added, to increase the book's usefulness, tables of foreign money, weights and measures, with their English equivalents. In quoting prices sellers should base their calculations on the weights and measures prevailing in any particular country, and the prices should be in currency. It is therefore evident how useful is a well-prepared customs-tariff list such as is presented in Kelly's directory. The book is published by the Kelly Publishing Co., 5 Beekman street, New York, and 182 High Holborn, W. C., London, England.

The Webster Specialties.

One of the most interesting trade publications issued recently is that which tells all about the Webster specialties. It tells what they are and where they are made. They are the outgrowth of 17 years' experience in a special field, and for efficiency they are admitted to actually distinguish power plants in which they are used. The Webster specialties include feed-water heaters, chemical purifiers, separators for steam and oil, expansion joints, preference valves, water-seal motors, vacuum governors, sight glasses, etc., all being devices which have been perfected

by the company's engineers and built in the Webster plant of the best materials by the best workmanship. Steam power-plant owners will find useful information for their consideration in this latest publication of Messrs. Warren Webster & Co., and should not fail to send for a copy of it. Address the offices at Point and Elm streets, Camden, N. J.

Exhaust Ventilators.

After 15 years of practical study of ventilation and a critical and commercial examination of the various types of ventilators now on the market, the International Ventilator & Deflector Co. has succeeded in producing a ventilator that is doing the work intended for it in an absolutely perfect manner. The company has made the most exhaustive tests, both anemometric and thermal, under the supervision of the United States government and others, and the ventilator produced has been pronounced perfect—simple, durable, stormproof, inexpensive. The International device is intended for ventilation of ships, buildings of all descriptions—residences, cotton factories, woolen mills, carpet and paper mills, foundries, machine shops—railway coaches, refrigerating cars, etc. It is, in fact, practical in every place and for everything where ventilation is required. The International Ventilator & Deflector Co. is now introducing its exhaust ventilators. Its main offices are at 425 Bond Building, Washington, D. C., with branch office and works at Portsmouth, Va. It is sending out an illustrated booklet presenting the details of its invention.

Weir Frog Co.'s Catalogue.

Buyers of railway supplies will recognize in catalogue No. 7 of the Weir Frog Co. one of the most complete publications of its kind ever issued. This book lists and illustrates, accompanied by brief details, the various standard railway supplies and specialties which the company named has manufactured for some years, and which have earned an enviable reputation among experienced men. The Weir products include frogs, switches, crossings and all kinds of regular and intricate track work, material for steam railroads, electric railways, horse-car lines and light-rail portable track work for mines, contractors, plantations, etc. Many of the articles are the original designs of the company's inventors, and possess features of exceptional merit which are not found in other railway specialties. The Weir Frog Co.'s plant is a new one, built since the previous catalogue was published, and it is one of the most modern in the country, equipped with the latest machinery and devices for manufacturing the numerous Weir products at the lowest possible cost consistent with high-grade work. Requests for catalogue No. 7 should be sent to the main offices at Cincinnati, Ohio.

The Komo Steam Trap.

Engineers and owners of plants should not fail to investigate the merits of the Komo Steam Trap. The simple construction of this trap and its perfect continuous action will appeal to experienced men. Its great advantage is that it has no wearing parts to cause expensive repairs. The only thing that is ever required is a new disk, which only takes 10 minutes to put in place. Another advantage is that all the working parts are on the outside and exposed, and it is impossible for the trap to become air-bound. The Komo trap is made in all sizes up to two-and-one-half-inch inlet and two-and-one-half-inch valve outlet, but to give a free flow of water when low pressure is used the size of valve will be increased to double the normal on all sizes except the No. 1. The traps are fitted with Jenkins or Fairbanks valves, but any flat-seat valve preferred will be used. An essential feature of the Komo is the bowed horizontal rods as a positive means of opening and closing the valve. This method is a simple and practical one. It affords the means of regulating the discharge, as the center movement is many times greater than the actual expansion or contraction of the receivers. It ensures perfect continuity and the greatest possible full economy. A leaflet describing the trap in full and illustrating its various parts is being issued by the general sales agent, P. A. Moulton, 92 and 94 Liberty street, New York city.

Buying at Birmingham.

[Special Dispatch to Manufacturers' Record.]
Birmingham, Ala., July 12.

The iron market looks decidedly better. Inquiry is materially greater, and transactions are greater in number and volume. While there is no advance in price, the tone of the market is better and indications are strong that a season of activity

has commenced, with better values in sight. Sales have been made for the last quarter of 1905, and there are some good inquiries in for first half of 1906. Some sellers are holding firm now at \$11.50 as minimum for No. 2 foundry. The buying wave has materialized. J. M. KENNARD.

The Iron and Metal Trades.

The *Iron Age* of New York says in its weekly review:

"The monthly statistics of pig-iron collected by the *Iron Age* show some interesting facts. Production of coke and anthracite pig fell off from the record of 1,964,000 tons in May, a month of 31 days, to 1,793,000 tons in June, a short month. The greater part was due to the restriction of the operations of the steel companies, whose product declined 136,000 tons, while the output of the merchant furnaces fell off only 35,000 tons. The active capacity has undergone a sharp decline, having receded from 443,002 tons on June 1 to 408,617 tons on July 1.

"The statement of stock of the merchant furnaces, which refers to a monthly product ranging from 650,000 to 675,000 tons per month, shows a further accumulation of 70,000 tons in June, added to 63,500 tons in May and 17,400 tons in April. During the last quarter, therefore, the stocks in the hands of merchant furnaces have accumulated to the extent of 151,000 tons, against a reduction in stocks during the first quarter of 83,800 tons. As an offset there must be considered the undoubtedly considerable decline in the unknown stocks in the yards of consumers, of the foundries and of the mills. The records of the past few months show that while the iron industry possesses a wonderful capacity for adjusting itself to changing conditions, it was not possible to check the headway gained during the extraordinary demand which developed in anticipation of spring. The industry is well in hand now, and consumption is proceeding at a wonderful rate, which the contemplation of the spurt in the spring should not obscure.

"There are many inquiries for foundry and forge pig-iron in the market, but the amount of tonnage booked continues small. There are reports of moderate lots of low-phosphorus pig-iron, gray forge and foundry iron being placed, but the volume has not been large enough to take weak sellers out of the market, and Southern iron has sold on the basis of \$10.75 at Birmingham for No. 2, with reports of even lower prices.

"The run of business to the structural mills is very heavy, the American Bridge Co. alone having taken 25,000 tons during the past week, the largest order being one of 6500 tons for the new building of the United States Express Co. in this city. The pressure for deliveries of structural material is so heavy that, according to some reports, orders have already been sent abroad. Premiums are being paid for prompt delivery, and there is a disposition in some quarters to agitate for an advance in the base prices.

"After a lull extending over some time car orders are again appearing in the market. Two Western roads are calling for 8000 steel cars, which would require about 100,000 tons of material.

"The Eastern skelp trade is showing some signs of revival. In the West an order for 600 miles of pipe for an oil line from Kansas to the Gulf is looming up.

"In the bar trade an interesting transaction is the sale of 2000 tons of twisted bars taken by a Pittsburg mill for reinforced concrete.

"Additional business is in sight for the steel-rail mills, and in the wire trade the first indications of a revival of buying have been noted."

FINANCIAL NEWS

The MANUFACTURERS' RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,
Baltimore, Md., July 12.

The Baltimore stock market has been dull during the past week, but prices generally were steady. In the trading United Railways sold at 13; the trust certificates at 13 to 13½; the income bonds at 59½ to 59¾; the 4s at 93¾ to 94; Consolidated Gas, 83¼ to 83½; do. 6s, 107¾ to 107½, and the 5s at 114½ to 115; Seaboard common was dealt in from 20½ to 22½; preferred from 42 to 43; the new common from 26½ to 25½; the new 1st preferred from 90½ to 90; the new 2d preferred from 53½ to 57, reacting to 54 and recovering to 56; the rights from 2 to 1¾; Seaboard 4s from 89¾ to 89½; the 10-year 5s, 103½ to 104½; the 3-year 5s, 101½; Cotton Duck 5s were dealt in at 83 to 82½; Consolidated Cotton Duck at 12, and the preferred at 33; G. B. S. common at 9¼; the incomes, 31¼ to 31½; the 1sts from 62½ to 62.

Commercial and Farmers' Bank sold at 131; Union Bank, 125; Fidelity Trust at 185.

Other securities were traded in as follows: Alabama Consolidated Coal & Iron preferred, 94; do. 5s, 90¾ to 90½; Northern Central, 100; Charlotte, Columbia & Augusta 1sts, 117½; City & Suburban 5s, Baltimore, 113¼; Western North Carolina 6s, 114; Baltimore City 3½s, 1940, 110¼ to 109½; do. 5s, 1916, 117; do. 3½s, 1930, 107½ to 108¼; Charleston Consolidated Electric 5s, 94¾ to 95; Georgia & Alabama 5s, 110½ to 111; Georgia Southern & Florida 5s, 113½ to 114; Virginia Electric Railway & Development 5s, 90 to 100; Baltimore Brick 5s, 84; Atlantic Coast Line Consolidated 4s, 102 to 102½; do. new 4s, certificates, 94 to 94½; do. Connecticut 4s, certificates, 5-20s, 94½ to 94; Maryland & Pennsylvania incomes, 55 to 56¼; do. 4s, 94½ to 94¾; Petersburg 5s, A, 113½; Norfolk Railway & Light 5s, 93 to 93½; Wilmington, Columbia & Augusta 6s, 109¼; Georgia Pacific 1sts, 122½; Central Railway 5s, Com., 117½; do. extension 5s, 118¾; Georgia, Carolina & Northern 5s, 111; Virginia Midland 1sts, 102¾; do. 2ds, 110; do. 3ds, 115; do. 5ths, 114; Virginia Centuries, 96½; Florida Southern 4s, 98½; Baltimore, Chesapeake & Sparrows Point 4½s, 97; Maryland Steel 5s, 105; Toledo Traction 5s, 100½ to 100¾; Consolidation Coal stock, 80½.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended
July 12, 1905.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line of Conn.	100	433	440
Georgia Sou. & Fla. 2d Pref.	100	75	75
Norfolk Railway & Light.	25	13½	13½
Seaboard Railway Common.	100	22	22½
Seaboard Railway Preferred.	100	42	43
United Railways & Elec. Co.	50	13	13

Bank Stocks.	Par.	Bid.	Asked.
Citizens' National Bank	100	27½	27½
Commercial & Far. Nat. Bank	100	140	150
Drovers & Mech. Nat. Bank	100	199	199
Farmers & Mer. Nat. Bank	40	55	55
German-American Bank	100	115	115
National Bank of Baltimore	100	125	125
National Howard Bank	10	11¼	11¼
National Marine Bank	30	35	40
National Mechanics Bank	10	23	25½
National Union Bank of Md.	100	125	125
Third National Bank	100	115	115

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked.
Fidelity & Deposit	50	152½	152½
Fidelity Trust	100	186	200
International Trust	100	141	145
Mercantile Trust & Deposit	50	147½	152
Union Trust	50	59	59
U. S. Fidelity & Guaranty	100	120	130

Miscellaneous Stocks.	Par.	Bid.	Asked.
Alabama Con. Coal & Iron	100	68	70½
Ala. Con. Coal & Iron Pref.	100	93	96
Consolidated Gas	100	83	83
Consolidation Coal	100	77	80½
G. B. & S. Brewing Co.	100	8	9½
George's Creek Coal	100	70	70

Internat. Mer. Marine Pref.	100	29	29½
United Elec. L. & P. Pref.	50	50	50

Railroad Bonds.	Par.	Bid.	Asked.
Atlan. Coast Line 1st Con. 4s, 1952	102	102½	102½
Atlan. Coast Line 2d Con. 4s, 1952	94	94½	94½
Atlantic Coast Line (Conn.) 5s.	114	117	117
Balto. & Harrisburg Ext. 5s, 1938.	112	115	115
Carolina Central 4s, 1949.	97	98½	98½
Charleston & West. Car. 5s, 1946.	112½	113	113
Char. Col. & Aug. 1st 5s, 1910.	117½	117½	117½
Char. Col. & Aug. 2d 5s, 1910.	110	110	110
Coal & Iron Railway 5s, 1920.	108½	109	109
Florida Southern 4s, 1940.	97½	97½	97½
Georgia & Alabama 5s, 1945.	111	111	111
Georgia, Car. & North. 1st 5s, 1929.	110½	111	111
Georgia Pacific 1st 6s, 1922.	122½	123½	123½
Georgia South. & Fla. 1st 5s, 1945.	113½	114½	114½
Maryland & Pennsylvania 4s, 1951.	93	96	96
Petersburg, Class A 5s, 1925.	113	114½	114½
Potomac Valley 1st 5s, 1929.	127½	127½	127½
Richmond & Danville Gold 6s, 1915.	116	116	116
Seaboard Air Line 4s, 1950.	89¼	89¾	89¾
Seaboard Air Line 5s, 10-year, 1911.	104	104½	104½
Seaboard Air Line 5s, 3-year.	101½	101½	101½
South Bound 5s, 1941.	112	113	113
Virginia Midland 1st 6s, 1906.	102½	103½	103½
Virginia Midland 4th 3-4-5s, 1921.	112	113	113
Virginia Midland 5th 5s, 1928.	115	116	116
West Virginia Central 1st 6s, 1911.	109	110½	110½

Street Railway Bonds.	Par.	Bid.	Asked.
Augusta Rwy. & Elec. 5s, 1929.	105	105½	105½
Baltimore City Passenger 5s, 1911.	106	107	107
Baltimore Traction 1st 5s, 1929.	110½	110½	110½
Baltimore Traction Conv. 5s, 1906.	100½	100½	100½
Central Ry. Con. 5s (Balto.), 1932.	117	117½	117½
Central Ry. Ext. 5s (Balto.), 1932.	118½	118½	118½
Charleston Con. Electric 5s, 1909.	94½	96½	96½
City & Suburban 5s (Balto.), 1922.	113	113	113
City & Suburban 5s (Wash.), 1948.	106	107	107
Knoxville Traction 1st 5s, 1928.	106	106	106
Lexington Railway 1st 5s, 1949.	101	101	101
Macon Rwy. & Lt. 1st Con. 5s, 1953.	97	98½	98½
Newport News & Old Pt. 5s, 1938.	90	90	90
Norfolk Railway & Light 5s.	92½	93½	93½
Norfolk Street Railway 5s, 1944.	108	108	108
North Baltimore 5s, 1942.	119	119	119
United Railways 1st 4s, 1949.	93½	94	94
United Railways Inc. 4s, 1949.	59½	60	60

Miscellaneous Bonds.	Par.	Bid.	Asked.
Alabama Consol. Coal & Iron 5s.	90½	91	91
Consolidated Gas 6s, 1919.	107½	108	108
Consolidated Gas 5s, 1939.	114½	115	115
Consolidated Gas 4½s, Cts.	101½	102½	102½
G. B. & S. Brewing 1st 3-4s.	61¾	62¼	62¼
G. B. & S. Brewing 2d Incomes.	30¾	31½	31½
Maryland Steel 5s.	104	105	105
Maryland Telephone 5s.	99	99	99
Mt. V. & Woodby Cot. Duck 5s.	82½	83	83
United Elec. Light & Power 4½s.	96	96	96

SOUTHERN COTTON-MILL STOCKS

Quotations Furnished by Hugh Mac-
Rae & Co., Wilmington, N. C., for
Week Ending July 10.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	88½	88½
Aiken Mfg. Co. (S. C.)	84	89
Anderson Cotton Mills (S. C.)	107	107
Ackworth Mills (S. C.)	110	110
Augusta Factory (Ga.)	75	81
Avondale Mills (Ala.)	100	105
Belton Mills (S. C.)	90	110
Bibb Mfg. Co. (Ga.)	102	102
Barton Mills (S. C.)	99	97½
Buffalo Cotton Mills (S. C.)	98	98
Buffalo Cotton Mills (S. C.) Pfd.	98	98
Cabarrus Cotton Mills (N. C.)	136½	136½
Chadwick Mfg. Co. (N. C.) Pfd.	102	102
Chiquola Mfg. Co. (S. C.)	96	96
Clifton Mfg. Co. (S. C.)	102	102
Clifton Mfg. Co. (S. C.) Pfd.	105½	105½
Clinton Cotton Mills (S. C.)	150	150
Columbus Mfg. Co. (Ga.)	92	95
Courtenay Mfg. Co. (S. C.)	89½	101½
Dallas Mfg. Co. (Ala.)	79	85
Darlington Mfg. Co. (S. C.)	73	78½
Eagle & Phenix Mills (Ga.)	112	116
Easley Cotton Mills (S. C.)	112	112
Enoree Mfg. Co. (S. C.)	82½	91
Enoree Mfg. Co. (S. C.) Pfd.	97½	102½
Enterprise Mfg. Co. (Ga.)	77	79
Exposition Cotton Mills (Ga.)	175	200
Gaffney Mfg. Co. (S. C.)	92	95
Gainesville Cotton Mills (Ga.)	25	25
Granby Cot. Mills (S. C.) 1st Pfd.	49	76
Graniteville Mfg. Co. (S. C.)	145	145
Greenwood Cotton Mills (S. C.)	95	100
Grendel Mills (S. C.)	100	106
Henrietta Mills (N. C.)	200	200
King Mfg. Co. J. P. (Ga.)	93	100
Lancaster Cotton Mills (S. C.)	100	106
Lancaster Cotton Mills (S. C.) Pfd.	98½	98½
Langley Mfg. Co. (S. C.)	90	98
Laurens Cotton Mills (S. C.)	178	178
Limestone Mills (S. C.)	95	101
Lockhart Mills (S. C.)	92	94
Louise Mills (N. C.)	102	102
Louise Mills (N. C.) Pfd.	102	102
Marboro Cotton Mills (S. C.)	206	206
Mills Mfg. Co. (S. C.)	96	96
Mills Mfg. Co. (S. C.) Pfd.	100	100
Monaghan Mills (S. C.)	97	103
Monarch Cotton Mills (S. C.)	85	85
Newberry Cotton Mills (S. C.)	115	115
Norris Cotton Mills (S. C.)	99	101
Odell Mfg. Co. (N. C.)	100	100
Orangeburg Mfg. Co. (S. C.) Pfd.	74	87
Orr Cotton Mills (S. C.)	146	151
Pacolet Mfg. Co. (S. C.) Pfd.	103	103
Pelzer Mfg. Co. (S. C.)	170	170
Piedmont Mfg. Co. (S. C.)	171	176
Poe Mfg. Co. F. W. (S. C.)	121	136
Raleigh Cotton Mills (S. C.)	100	100
Richland Cotton Mills (S. C.) Pfd.	49	49
Ronoke Mills (N. C.)	129	129
Saxon Mills (S. C.)	98	104
Sibley Mfg. Co. (Ga.)	55	63
Southern Cotton Mills (N. C.)	81	81
Spartan Mills (S. C.)	132	132
Springstein Mills (S. C.)	90	100
Trion Mfg. Co. (Ga.)	130	140
Tucapau Mills (S. C.)	125	128
Union Cotton Mills (S. C.)	131	131
Victor Mfg. Co. (S. C.)	113	113
Warren Mfg. Co. (S. C.)	99	102
Warren Mfg. Co. (S. C.) Pfd.	102	102
Washington Mills (Va.)	21	21
Washington Mills (Va.) Pfd.	96	96
Whitney Mfg. Co. (S. C.)	113	113
Wiscasset Mills (N. C.)	125	125
Woodruff Cotton Mills (S. C.)	97½	104

The Southern Bank of the State of Georgia at Savannah, Ga., reports at close of business June 30 loans and discounts,

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